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The Philosophy of Hypnotics

TWENTY years ago, had anybody asked me to name the two principal hypnotics, I should undoubtedly have replied, morphine and chloral. Now—I wonder how many years it has really been since I gave either of these as a hypnotic, or even thought of giving them primarily as a means of drowning the excited senses into a drug-oblivion?

Sleep is so inevitable that its absence is always indicative of an active cause that prevents it. The indication, therefore, is not so much to induce sleep, as to ascertain why the patient does not sleep.

Insomnia is a most valuable symptom, when duly appreciated. It may signify the beginnings of mental aberration, the presence of some form of self-intoxication, or that overtaxing of the brain that surely in time leads to exhaustion and premature failure of mind or body.

Insomnia is an effect and a cause of mental derangement; for no human brain can long withstand the effects of the deprivation of the normal period of repose and recuperation. But a busy world demands of us a drug that will compel sleep, and only listens to our warning, after the mischief has been done and it is too late to do more than repair the lesions established.

A writer in *The Chicago American* proffers these suggestions: Sleeplessness being due to an excess of blood in the brain, one should get rid of the excess. Lying on the left side allows the weight of the body to oppress the heart and so interferes with its action. But if you can, lie on the left side when you retire; the weight quiets the heart and decreases its activity. Then, as you begin to go to sleep, turn to the right side, and the trick is also turned, for you will go to sleep with no further trouble.

This certainly is a good way for those with whom it works well. Many times insomnia is due to excessive vascular tension, and this to toxemia. Relieve the tension and favor elimination by taking a small dose of aconitine, and perhaps a dose of saline laxative, and sleep will follow, natural and refreshing, and the toxins will be excreted by the freer supply of blood sent to the eliminant apparatus.

But, if the sleep is prevented because the vascular tension is lax, permitting the blood to flow back to the brain and distend its vessels when the patient lies down, we must give a dose of digitalin and restore the needed balance of tension. Sleep will then result, and this will give recuperative force, so that the remedy is curative as well as palliative.

I have just had a beautiful illustration of this in treating a man stopping the use of morphine. He did not sleep; and his vascular tension was so low that digitalin was indicated. So he got a dose of it—

and all that afternoon he was dozing off and getting the most refreshing little naps.

These conditions are not exceptions—in truth, they occur so uniformly that I am disposed to place aconitine and digitalin—also the laxative—in my list of hypnotics.

How much to give? Just enough to do the work needed.

In spite of mishap, let the truth stand that those who travel fast and go far, go by Love's Parcel-Post, concerning which there is no limit to the size of the package.—Elbert Hubbard.

DOCTOR OR DENTOR?

A Doctor of Dental Surgery writes to one of the journals devoted to his specialty, suggesting that his confrères drop the misleading designation of "Doctor," and assume that of "Dentor." The reasons he gives are, that the former title belongs of right to the medical profession, as that of Reverend does to the clergy, and Esquire to the law; that it was an unwarranted assumption for the dentists to take the title, and relinquishing it would signify the complete cutting loose of dentistry from medicine.

Neither the suggestion nor the reasons cited appeal to us. The title of Doctor does not pertain exclusively to the medical profession, and never did. Doctor simply implies taught, learned, instructed, or possessed of such qualifications as come by study, in contradistinction from what are gathered from experience. There are, and have been, many kinds of doctors—doctors of law, of divinity, music, and so on, and all these have quite as good claim to the word as we.

That which is distinctively our own, of which we enjoy the monopoly, is our title of Doctor of Medicine—medical doctor. Unless we specify the medical part of our degree, we have no distinguishing mark. Should the College of Tonsorial Art see fit to adorn my barber with the insignia of Doctor of Barbering, he can call himself Doctor as lawfully as I. Pharmacy is asking for the designation of Doctor of Pharmacy, to which we make earnest protest, for obvious reasons. Between the Doctor of Medicine who prescribes, and theDoctor of Pharmacy who dispenses—and prescribes—the public, which has its own affairs to think about, would scarcely distinguish. But the dentist has a better right. He is a doctor, a medical doctor, too, who practises one of the specialties in medicine, and does it well. He has never been charged with encroachments on the field of the doctor of medicine, and has not had to invade, for he has made so much of his own field that he has had no incentive to encroach. Rather he has had to complain of encroachments into his own demain made by the general practician.

That the adoption of a distinctive title should signify the complete divorce of dentistry from medicine is another good reason for opposing the movement. It is contrary to the trend of science. The farther we advance along the path of progress in any of the learned professions, the nearer we come together. The dentist can make little improvement on the admirable technic he has developed unless it be by taking cognizance of the rest of the body. Professor Talbot has shown that the malady that so long baffled his dental colleagues, pyorrhea alveolaris, was readily explained by a study of the intestinal conditions, and as readily cured by remedies addressed to the digestive apparatus. Great as was this step in its direct application, it was still more important in indicating the line of advance to the dentist.

The dentist must extend his view to the whole body, and study its interrelations to comprehend the disorders of the mouth. He must be a doctor of medicine first and his studies of dentistry must be superadded. As Garretson used to say, a man who is content to spend his life without a thought beyond poking bits of gold into holes in teeth can not do even that very well. As pharmacy is a step toward the degree of doctor of medicine, so dentistry should be a step beyond it.

In all the departments of human endeavor the value of a scientific education is becoming evident. The farmer used to enjoy unlimited merriment over the "theoretic cuss" who learned farming in school, from books. Nowadays the knowledge

that enables one to gather five hundred bushels of potatoes from an acre that no longer produced one hundred, is beginning to be appreciated even by the old-fashioned husbandman. The science that tells what crops a farm is good for and how to make it bear more with less exhausting methods may be theoretic, but it is assuredly also practical. The methods that enable one to realize a net profit of $5000 from five acres, instead of $2500 from 640 acres, are surely practical enough to win the approval of the man whose knowledge consisted in maxims anent planting "in the full of the moon."

The dentist who has not a knowledge of general medicine may be a good mechanician, but he is not an educated, and consequently capable, dentist. He may get along with easy cases, but if his practice is large he must sooner or later get into trouble, through his ignorance. The worst of it is that this ignorance prevents his seeing the trouble approaching in time to forestall it.

There is another side to this question that has never received the attention it merits: The dentist's studies should be placed at the disposal of the general practician, to aid him in his own work. While the teeth are affected by the conditions of the rest of the body, the latter must also be influenced by the affections of the teeth. The ophthalmologists have taught us much of the influence of ocular maladies over the other vital functions. Woakes pointed out the connection of ethmoid disorders with headaches. Specialists and general practicians refer cases back and forth continually. Inestimable knowledge has come to the present writer while sitting in the operating rooms of a chiropodist—lessons were there learned that not one of the very many physicians with whom he has come in communion had learned. The dentist is, in spite of himself, a specialist in medicine; and as such he has the same need of the rest of the profession it has of him.

But to return to the subject—our dental friend forgets that the "titles of address" are not arbitrarily chosen to designate the members of a profession, but are derived from academic degrees. The word "doctor" has an honorable scholastic history, of which every one who bears it should be proud; and it has been used so long as a distinguishing appellation for professional men, and men of learning, that it would be difficult to replace it—even in the case of those dental "doctors," who, after all, are, or should be, specialists in our common art.

We hope no dental college will ever try to degrade the profession of dentistry by providing a cheap title which suggests that dentistry in on the level with blacksmithing or plumbing.

Many a physician can indorse with a full heart the advice of *The Willows Magazine:* "Keep the patient's relatives out in the fresh air as much as possible."

A TRIP TO ANOTHER WORLD

You are a little tired. A bit discouraged. Things persist in going wrong. Everything and everybody. The country goes to the dogs. Each political party is more corrupt and wrong-headed than the others. The hero you would like to elevate to a pedestal has a smudge on his face. Depravity grows as sentiment decays. Patriotism is lost in graft, honor in levity. The drunkard you have worked over so long, throwing your heart into the task of his reclamation, making untold personal sacrifices for him, goes back to his booze without the shadow of an excuse—except that he wants to do so. Life seems scarcely worth while. Like Cassandra you see the coming evils, but nobody listens to your warnings.

Now wouldn't you like to close your eyes a moment and awake in Mars—see about you scenes unfamiliar, vegetation unknown, creations undreamed of, and yet with enough of the known to link yourself to them and enable you to comprehend and appreciate them? What a relief and an uplift the new and different things and thoughts bring to you.

You can not voyage to Mars yet, but something of the same relief and uplift come when you leave the world of the Ordinary, and plunge into Dr. William Colby Cooper's "The Primitive Fundamental." It is so far from State Street! His philosophy reaches the roots of evil, and lo, they are the roots of life! What

is is—and is because it has to be. The bad is the negative pole to the positive good. Men neglect your advice because they, too, must know for themselves, draw their own conclusions from their own experiences. No matter how wise we seem to ourselves we must never forget the limitless ocean of Truth that surrounds and pervades us, of which we get but shadowy glimpses now and then. Our neighbor's apparent faults spring from sources beyond our ken, and to him they are not faults, even though they would be such to us. Ten centuries from today the problems that beset us now will have lost their significance.

Cooper is a most attractive and charming personality. The interviews we have had with him stand out in our memory as oases in the life desert. He likes to follow a writer who drives him to the dictionary, and he himself indulges in words and phrases that stir a man's memory and his thinking faculties.

He is optimistic: "There is an absolute philosophy . . . . revealing its certainty in that daze which marks the distal limit of human perspicacity, but which holds in its promiseful depths an anticipation of the absolute."

He is logical: "Matter is indestructible. It follows in inevitable corollary that matter is uncreatable."

He is tolerant: "Good is simply less bad; bad is less good. . . . . The jumble results from intrinsic truth's resentment of a false assumption, and is an ineluctable confirmation of the identity of right and wrong."

He is surely not orthodox: "The anthropocentric notion grew out of that auxesis which is the direct product of a belief in creation."

His thought has a clarity that renders it comprehensible to the most limited intelligence: "Evolution is merely natural law's immanent assertiveness in coincidence with the instant-constant stress of cosmic momentum."

His sight pierces to the center of things: "So far as we, in the helplessness of our ignorance, can see, nature as a whole has in it no element of justice or mercy."

But faith triumphs after all: "The long stem of evolution, whose joints are chiliads of heartless tragedy, bursts at last into the great white blossom of altruistic beauty and sweetness."

Cooper's philosophy is pagan in dogma, Christian in sentiment, good wholesome matter for one's rainy days. Place it on your table book-rack, with his "Preventive Medicine," "Immortality," and "Tethered Truants," for delectation when you are tired through and through.

But Cooper is something more than a mere philosopher—he is a doctor, a real one too. He has contributed to the literature of the clinician a case that stands as an exemplar; one of those instances of ready wit and immediate action by which a life was saved from apparently inevitable death; which goes to illustrate the difference between the real doctor and the pretender.

The tale has already been told in CLINICAL MEDICINE, and by Cooper himself, but it is well worth repetition: On the street, one of Cooper's wealthiest patrons rushed up to him crying that he had just taken by mistake a huge draught of tincture of aconite. Cooper happened to have in his mouth a chew of tobacco. Telling the man to open his mouth he spat the tobacco into it—and ran for his life. He never would have reached his office had not the man been delayed by the instant and repeated necessity of vomiting. While the patient was breaking down the door Cooper got out the back way and left town, to return only when friends had convinced the man that in no other way could his life have been saved. Even so I feel suspicious that for many a day thereafter they never met without the man's hands itching to get at Cooper, and the latter's legs feeling an automatic tendency to carry their owner far thence.

OUR RELATIONS TO THE PUBLIC

The relations of the medical profession to the public are beginning to attract more attention. In *The Bulletin of the Harris County* (Texas) *Medical Society* (a very creditable publication), Dr. John T. Moore contributes a discussion of this topic. His

paper is quiet, conservative, and sensible. He limits his suggestions to some of the minor grievances, such as calls unnecessarily demanded during the hours of rest, inadequate pay for services, and so forth.

But the important point he touches upon is the interest the community has in the doctor's betterment. It is the people to whom the movement for higher medical education should appeal; yet so little is this comprehended, even by the higher legislators, that we have the spectacle of a United States senator rising in that august assembly and declaiming against the Owen Bill as an attempt to monopolize medical practice by one of a number of medical sects.

Dr. Moore speaks well of the public's interest in having competent, well-prepared physicians; and of affording these the means of keeping up with the advance by attendance on postgraduate work. This, he rightly asserts, should be made possible by subscription of funds by the people, just as the pastor is enabled to take (and give?) a vacation, and enliven his sermons by the experiences of travel.

To exemplify the benefits accruing to the public, Dr. Moore speaks of the doctor's efforts at preventive medicine. But here he approaches the verge of a precipice. Who pays the doctor for preventing disease? How is he to live if disease is prevented?

Every doctor we have known was possessed of a stomach that demanded a dose of pabulum, *q. s., t. i. d.* Most doctors have wives and children. Every last wife needs a new hat and a summer outfit; every last kiddy wears out shoes—gee! how fast! How under the firmament is the doctor to pay his way when he is paid only for attending the sick and there is no sickness?

When you have answered this query satisfactorily, you may go on and demonstrate why the proposed changes in our relations with the public, as suggested in recent editorials, are absurd, preposterous, unethic, and impossible.

GONORRHEAL DERMATOSES

The Military Surgeon for June presents an interesting paper by Past Assistant Surgeon Pugh, U. S. N., detailing a number of cases of cutaneous affections occurring during the progress of acute gonorrhea, and which he attributes to that malady. The evidence, however, by no means is conclusive. That any dermic affection should occasionally accompany an acute infection of this sort is possible, but not specially significant; that there is a direct connection, etiologically, between the two, is a matter that demands proof. Mere inference will not do.

Dr. Pugh speaks of the cutaneous manifestations of gonorrhea as of three forms—diffuse scarlatiniform, or rubellous, multiform erythema, and purpuric. Of the eight cases described, three were of the first variety, three of the second, one of the third, and one showed both erythema and purpura. Another displayed macules or papules in addition to a scarlet eruption. Conditions of this nature often are ascribed to copaiba, but in the cases recorded there was no obvious connection of the sort, while in some the eruptions preceded treatment and even the appearance of the urethritis.

Three theories have been propounded to account for these dermatoses, namely, that of their reflex character from the urethra to the skin, that of a toxemia from virus absorption, and that of a bacteremia, the gonococci themselves entering the blood.

The first of the theories named is another of those assumptions, so many of which have been accepted in medicine as true, without being asked for credentials. Casper and Lewin accept it, and the latter ascribes the outbreak to the passage of an urethral instrument, especially in the later stages of the attack. It is quite conceivable that this procedure may occasion a lesion by which the cocci find entrance to the blood. Senator and Kaminer favor the toxemia theory, while later writers lean to that of bacteriemia.

Probably each is right, in some cases, but the ease with which these organisms penetrate the tissues renders it probably that bacteriemia is the rule.

A fourth explanation is, that the eruptions, when not due to copaiba, are merely coincidental. There is no particular reason why a person affected with acute gonorrhea should not be at the same time attacked

with any cutaneous malady; the paucity of recorded cases compared with the vast number of gonorrheal infections renders this the more probable.

Nevertheless, considering the extraordinary virulence and endurance of this venereal parasite, it does seem remarkable that general infections with peripheral manifestations should not be far more frequent than as yet have been suspected. That such cases actually do occur, is shown by one encountered in the writer's personal practice.

A man of middle age had had gonorrhea not less than sixteen years previously, this resulting in chronic infection, as manifested by leucorrhea in the wife and the presence of the cocci in her vaginal secretions. This man applied for relief from a most distressing pruritus, generally worse at night. Examination revealed the presence of a few papules scattered over the body unsymmetrically, some of them pustular. The pus contained no microorganisms other than numerous gonococci.

The pruritus and the infection resisted treatment with the calcium and arsenic sulphides pushed to full saturation and sustained there—this requiring a daily dosage of 50 grains of the former and about 1-8 grain of the arsenic. Both pruritus and infection finally yielded when pilocarpine in full sudoriferous doses was added, and a strong local germicide was applied to the affected skin.

The importance of this case consists in the fact that the organisms were demonstrated in the cutaneous lesions by the microscope.

There are two kinds of fools—those who think they are wiser than they are, and those who think they are less wise than they are.—The Silent Partner.

EDUCATION? WHAT EDUCATION?

Time was when people talked of getting "an education." The curricula of all schools were arranged with the idea that there was one education that embraced everything worth knowing. The Youth who proudly stepped forth from his alma mater, sheepskin under his arm, felt that he was educated—usually conscious of knowing it all. Should he decide to devote himself to one of the professions, he passed a few more years at college, and then, surely, he must be superlatively "educated."

Realization is not long in coming, and the young man quickly finds that practically he knows nothing. There is little exaggeration in the caustic remark that he has to begin by forgetting nine-tenths of what he has learned at school. Plunged into the thick of the battle of life he finds the musty lore he has spent years in acquiring has been utilized and gone to form a part of the universal, subconscious stock of the race. Mankind has gone far beyond it and is continually adding new knowledge that has not yet been crystalized in texts.

Education consists in the acquisition of knowledge and the training of the faculties of the mind. Knowledge has developed far beyond the point where any one person may hope to acquire all there is of it. A college course does not render the graduate capable of tackling any and every task that may come to him, but merely gives a foundation upon which he may begin to build his true education. Even in so far as the training of the mental faculties is concerned it is now understood that this applies only to the things in which the training is given. A course in Latin and Greek does not aid the pupil in his other studies, according to present belief. Nevertheless this is not altogether true, for one learns from the study of languages, and from mathematics and logic, correct methods and sound principles that may be applied to other branches.

The acquisition of knowledge, nowadays, does not aim at universality, but at best a selection must be made. What facts are to be gathered? The college course is largely selective. The essential thing to be held in view is that this necessitates a choice of material based on the future life work of the student. The selection must be of such topics as treat of the work he expects to devote himself to later.

This selection must begin during the college course. Whatever may be the student's preference as to a profession, medicine, law, theology, pedagogy, engineering in any of its numerous depart-

ments, agriculture, business, the college curriculum offers a choice of topics designed to prepare him specifically for the selected vocation. Even in colleges especially designed for the study of agriculture a number of different selective courses are open for the student's choice. He may specialize in agronomy, forestry, irrigation, pomology, horticulture, agricultural engineering, or in several other departments.

The choice should be made not later than the beginning of the junior year. If the student intends to enter the medical profession he should give especial attention during the junior and senior years to appropriate topics—not with the idea of shortening the period of study in the medical school but to render himself better qualified to comprehend and utilize his instruction there. A groundwork of anatomy, physiology, chemistry, and botany, renders the labors of the medical faculty easier and more effective. How fervently does the teacher long for the day when he may teach what he wishes, to students qualified to comprehend his teachings! An incident of the writer's first course illustrates: Our professor of ophthalmology had occasion to recommend the use of "mitigated" nitrate of silver; but one of the class insisted he had said "medicated" —and many of the class agreed with him!

With its numerous specialties, it would seem natural that the medical course should likewise be largely optional, and that after the two years of anatomy, physiology, chemistry, materia medica, histology, pathology, bacteriology, and the principles of therapeutics, including hygiene, the student might devote himself mainly to the specialty he intended to practise. But at present this is impossible, for the state boards examine on the ancient system, all applicants looking alike to them. So long as this is the case the instruction in the junior and senior years must also be general, and the special studies undertaken by the student are voluntary and casual. He can only devote himself selectively to his chosen specialty when he comes to the post-graduate college.

Here we light upon an astonishing phenomenon—the physician attending these institutions rarely devotes himself to the things he most needs in his practice at home, but runs about amusing himself. Explain?

The average physician does family practice. His is the most important, the most useful, the most essential, of all the medical specialties. He sees the patient first, recognizes the malady in its earliest stages, has the best chance to treat it effectively. He must know to the uttermost limit of the known or knowable, three things: physiology, pathology, therapeutics.

He must be up and ready with all the numerous non-drug methods and appliances, and if he is a real physician he knows that for nine-tenths of his work drugs form the readiest and best resource. And instead of demanding of the post-graduate college instruction in these departments—he trots off to see somebody extract the Gasserian ganglion, which he never in any possibility could be called upon to do, or to operate for cataract or appendicitis, which he straightway proceeds to do—and botch. Or he investigates the conditions presented in a great city but not in his own community. He may enjoy himself, but he should call it by its true name, a vacation, and not a period spent in a serious attempt to improve himself professionally.

Not a solitary post-graduate school in America has a chair devoted to the principles of therapeutics, or to drug applications.

Finally—when *you* go to post-graduate schools, devote yourself to the things you can use in your work. Try to make of yourself a better doctor.

The tendency of modern therapeutics is towards smaller and more frequently repeated doses.—Reynold Webb Wilcox.

HIGH COST OF LIVING AND "LOST MANHOOD" NOSTRUMS

One phase of the iatrophobiac* type of degeneracy is that which, looking upon medical care as a luxury, dodges payment for it. This parsimony, which Molière ridiculed in "Purgon," buys patent med-

*I. e., "doctor-hating." From *iatros* (Gr.), physician (*iaomai*, to cure; *ios*—Lat., *virus*; Skr., *vish-as*—poison and also drug; same as *pharmakon*).

icines to avoid paying physicians' fees, gets "cut rates" on "domestic remedies," patronizes "free dispensaries," and "sponges" prescriptions. One of the moral obliquities of the adolescent sexual nosophobia (morbid fear of disease), as opposed to hypochondria (morbid belief in disease), is this type of parsimony. Such a young man is bled by "lost manhood" nostrums and quacks under the guise of saving physicians' fees. Of course, his parsimony affects the substitutes.

The Chicago Board of Review should not, therefore, have been astonished at the high cost of living cutting into this luxury. Yet, members of the board of review looked up curiously when the announcer lately called out the case of a medicine firm that makes a tablet warranted to rejuvenate, regenerate and exhilarate any man, age or color notwithstanding, satisfaction or money refunded. Up stepped a small, weazened man, emaciated, wrinkled (apparently with worry), and nervous.

"You—you represent this concern?" asked Fred W. Upham, weakly.

"I do," was the answer in a small, uncertain voice; "and I want to protest against this assessment, because our business has been very poor and we have decreased our stock considerably."

"I grant everything you say," decreed Mr. Upham, cutting the assessor's valuation more than half.

Despite the boom given the "lost manhood" charlatanism by the distinguished "chemist," late of the Tweed-governed New York institute of pathology, now the great subsidized university at Baltimore, the sexual nosophobiac is becoming economical in "curing" his "loss of manhood."

Energy will do anything that can be done in this world; and no circumstances, no opportunities, will make a man without it.—Goethe.

A GREAT EDITORIAL IN A GREAT NEWSPAPER

One of the most encouraging signs of the times is the interest which the lay press is manifesting in the work of the medical profession. This interest in America dates from the conservation movement inaugurated by Theodore Roosevelt. It was he who pointed out, if not first at least first with the living power necessary to awaken the souls of men to the importance of the problem, that "this country has grown rich because of the masterly people who inhabit it and the great resources with which Nature has endowed it." (We quote from *The Chicago Tribune.*) It was he who brought us to understand, as we had somehow failed to understand before, that the future of the nation depends upon the conservation of our resources—resources which embrace not only forest, field and mines, but also strong men and strong women.

The Chicago Tribune in an editorial entitled "Real Progressivism," shows, with a clearness that must convince any thoughtful reader, that there is no question of such vital interest to this nation as the conservation of its manhood. Besides this, the tariff, currency reform, the size of the army and navy, and other topics for campaign discussion, are absolutely insignificant. In caring for our own we have stood still while other nations have advanced. Our commercial rivals in Europe, as *The Tribune* says, "exert special pains to protect and conserve as their greatest national resource —their people."

In Europe the death rate from typhoid fever has been reduced until it is one-third what it is here. Deaths from tuberculosis have been cut in two, while we have not reduced them one-fourth. The Germans and English have evolved methods for the protection of the health of their working people which are far in advance of what we have in this country. *The Tribune* puts forward, as the really essential part of the progressive movement, "the carrying out of measures, national, state and municipal, for the protection of our greatest asset—the health and efficiency of the people." It puts the thing in a nutshell, when it says:

"Malaria decreases the value of land at least $10.00 an acre.

"Hookworm, by producing inefficiency, influences the price of cotton goods more than the tariff.

"Pellagra is a problem as important as currency reform.

"Consumption is of more consequence than the coinage of silver.

"Pauperism is a practical problem that deserves the most persistent and thorough study."

The progressive program which *The Tribune* proposes embraces the following propositions:

"That communities should be helped to banish consumption and typhoid fever:

"That mothers should be protected during child-bearing;

"That the slaughter of the innocents should cease, as far as it is possible to make it cease;

"That children should be given a chance to grow up in strength;

"That men should be enabled to labor at high efficiency;

"That prevention should replace cure;

"That pauperizing of men by charity should give place to a scientifically developed scheme for the care of those who need to be cared for along broad economic lines."

Whether you are a "progressive," a "democrat," or a "republican" you can assuredly endorse this platform. Every man's opinions are his own, and we shall not try to dictate to any man what he shall believe or for whom he shall vote. But we hope that the members of the medical profession will lay aside their differences and for get their jealousies long enough to fight together upon this program for the good of our race and the preservation of our nation.

Take joy home,
And make a place in thy great heart for her,
And give her time to grow, and cherish her;
Then will she come, and oft will sing to thee
When thou art working in the furrows; aye,
Or weeding in the sacred hours of dawn.
It is a comely fashion to be glad;
Joy is the grace we say to God.

—Jean Ingelow.

THE THERAPY OF CYSTITIS

Few of the multitudinous maladies to which humanity is subject entail the peril and suffering attendant on those of the bladder. It must be confessed, moreover, that our therapeutics in this department gives little cause for self-congratulation. The remedies ordinarily administered by the stomach are uncertain and feeble; the local medication is tedious, painful and not very satisfactory. I had been taught to look on the operative methods as the best resort, offering rest for this viscus that might afford relief; but my first experience completely demolished this hope.

The use of definite remedial agents fitted accurately to the disorder of physiologic function presenting has worked here as elsewhere its wonders, and afforded a degree of help not previously attained. I have selected some clinical reports from European sources describing the applications of these remedies made there, illustrating the direct therapeutic method. Note that the use of arbutin was unknown in France when these were published, that remarkable glucoside having been developed since then.

My attention was first directed to arbutin by observing that every plant containing it had been advocated as a remedy for urinary maladies. In these it is enveloped in a prohibitive mass of tannic acid, and only when freed from this could its curative value be determined. Besides, it is one of those slowly acting remedies that follow the processes of nature, and does not commend itself to those who look for the miraculous immediate results of surgery. To those who know its powers and how to use it, arbutin is a boon beyond estimation.

A Portuguese practician, Costa, tells of a man 60 years of age afflicted with retention of urine, necessitating the catheter, and incontinence. He also had dyspepsia, pyrosis, vomiting, anorexia, weak pulse, and urine dark and muddy. He began taking strychnine arsenate, four doses a day; with quassin, bismuth and soda, at meals. In eight days the digestion had become normal, as was also the urine.

Lorenzana details a case of chronic cystitis with hematuria in a priest aged 60, the patient being profoundly prostrated, with temperature subnormal, frequent painful calls to urinate, and chills, the malady having lasted two years. The use of the catheter had been compulsory for three months. Treatment was as follows: strychnine, hyoscyamine, benzoic acid, one dosimetric granule each every two hours; quinine hydroferrocyanide, two, and sodium benzoate,

one granule every three hours; quassin, three granules before meals; podophyllin, three granules each evening. A saline laxative each morning. Improvement followed for ten days; then retention was relieved by cicutine and hyoscyamine, one granule each every quarter to half hour. By the end of a month he was able to resume his duties.

Baillif's case was that of an old soldier, aged 65, hemorrhoidal, with a history of two nephritides. Since the last attack he had difficulty in emptying his bladder—frequent calls to urinate, increasing, and blood appearing in the urine. When paralysis of the body of the bladder follows spasms of the neck, it is necessary to employ simultaneously strychnine, hyoscyamine and digitalin.

Lacoste described four cases of cantharidal cystitis. The first followed the use of a blister. Pneumonia followed, to which the patient succumbed. The second was that of a man of 60, who had had pneumonia, treated by fly-blisters. Cystitis followed, but the physician had now heard of the new method, and administered hyoscyamine, one dosimetric granule every quarter hour. In two hours the urine was discharged without the catheter, and sleep followed. The third was a man aged 30; similar in cause. The bladder resumed its expulsive power after fourteen doses of hyoscyamine, two every fifteen minutes. The fourth was a boy of 7, with cystitis following a blister for pleurisy, allowed to remain in place for eight hours. Hyoscyamine subdued the pain and irritability of the bladder and quieted the spasm of the sphincter, while tending to restore the contractility of the detrusor.

In cantharidism Becler urges the use of hyoscyamine for the accidents attending the use of cantharides. For the violent vesical pains he gives a granule of hyoscyamine every quarter hour. It is rare that more than eight or ten are required for adults, three or four for children under five years.

Van Inweghe tells of a boy, aged 5 years, suffering for three years with dysuria, strangury and ischuria at times. The case seemed thus: The child was infiltrated, probably there was default of the renal secretion, the urine scanty, charged with salts, these irritating the ureters and the bladder and provoking ischuria. There resulted a cystalgia, with painful contraction or straining of the neck and paresis of the body of the bladder. Surely a want of antagonism.

These three indications should be met by digitalin, strychnine and hyoscyamine, and nothing would be risked by pushing them to effect. These remedies were ordered, a granule of each every half hour. During the night the child urinated freely and in the morning was playing on his bed, free from tenesmus and pain. He had taken twelve dosimetric doses of each, and eight more doses were given during the next two days. Besides, he was given quinine hydroferrocyanide, four doses a day, this being in the low malarial land of Holland. Probably the malady had not advanced beyond the dynamic stage.

If you want to "do something for humanity," do something for those who are doing their own work creditably, paying their own bills honestly, and not howling about their ills or their wrongs. The old and the unfortunate should have our sympathy and our aid, but the best help we can give the shiftless is to compel them to work with their own hands, and to bear their own burdens.

ARTERIAL DISEASE AND ITS TREATMENT

Much carelessness is manifested by authors in describing affections of the coats of arteries. French, writing in *The Lancet*, describes the three commoner affections as follows:

1. Atheroma affects the tunica intima, in spots, as abscess followed sometimes by ulcer, sometimes by calcification; occurring mostly in the aorta, the first parts of its main branches, the coronary and cerebral arteries.

2. Endarteritis obliterans affects the medium-sized cerebral and spinal arteries, following syphilis, as a concentric proliferation of the whole intima, lessening the lumen and the supply of blood. Senile calcification is a deposit of lime salts in the muscular coats of the medium-sized arteries, like the radial, causing rigidity, but neither obstruction nor high vascular pressure.

3. Arteriosclerosis is a fibrous degeneration of the muscular coat, without narrowing the lumen of the vessel. This is especially apt to deceive the physician into diagnosing high pressure, as the thickened vessel gives the impression of tension to the finger, when the pressure really is not elevated. In the absence of a sphygmomanometer, the accentuation of the second arterial sound affords a better means of judging.

The toxins of fatigue, muscular strain, tobacco, lead, alcohol, syphilis, uric acid, purin bases and other meat products, renal toxins, obscure pressor urinary substances, and intestinal toxemias have all been blamed for the causation. Each probably is a factor, but none touches the subject fundamentally. Each is known to be present without arteriosclerosis, while the latter develops without any one of these elements being factors.

The theory that attributes the malady to increase of vascular tension, due to contraction of any part of the vascular system, thus causing peripheral resistance, does not approve itself to French, who denies the existence of any such contraction. His own explanation depends upon what he denominates the vasomotor factor.

The occasional need of various organs for more blood is met by the variation in the capacity of the arteries, due to their contractility and expansibility, under the control of the vasomotor system of nerves. When by reason of fibroid changes in the muscular coat this adjustability is lost, an increased blood supply can be secured only by increasing the force of the cardiac impulses. This carries more blood to all parts of the body, besides that at which the excess is really needed. Hence the prime factor is an increase in the heart action, consequent upon a previously existent muscular fibrosis of the arteries.

This fibrosis, therefore, renders permanent increase of vascular tension a necessity, unless the patient reduces his activities to the lowest possible point. Hence, to sedate this tension, is to interfere with nature's means of overcoming the consequences of a permanent defect in the human machinery. Put the patient to bed, starve him, or in any way minimize the demands of the system for blood, and the tension will fall.

While this fibrosis is progressing some muscular fibers will be hampered by the fibroid elements; and this condition may be benefited by what French terms arterial gymnastics—massage, graduated Nauheim exercises, baths, and the like. But if the patient persists in leading a life of activity that demands occasional extra blood supply to some one or other of his organs, as when digestion requires more blood to sustain its activity, there will come a time when he cannot keep up this salutary tension, and failure will be evident at the point least able to secure the requisite supply. Then local symptoms develop, and the physician is called upon to sustain the failing heart powers.

But if the fibrosis precedes the increase of tension, what then causes the fibrosis? This French attributes to the conditions of modern life. He says: "In many there has been little need for active locomotion, and the peripheral vessels have hardly varied in caliber from day to day, from week to week, from month to month. The stomach is seldom empty, and the vessels of the splanchnic area are kept constantly employed at about the same caliber. Brain-work is hard, and there are insufficient variations between pronounced activity and considerable rest. Year after year has gone without a holiday. Day after day he works with his brain under precisely similar conditions, uses his body and his limbs far too little, keeping his alimentary canal fairly active all the time, and doing the most he can to maintain all his arteries at about the same caliber. Surely, it is not a long stretch of imagination to compare the muscle-coats of the vessels in this case with the biceps of the arm kept in splints."

This brings us to his remedy—arterial gymnastics. Massage, periodic purgation, periodic fasting, periodic walking, golf at week ends, boxing, swimming, Turkish baths, electric and other treatments, regulation of water drinking, dieting are all examples of such gymnastics. The benefits of graduated Nauheim exercises may be extraordinary even when the patient has already a high pressure. This may fall

or rise, and in both cases be beneficial. When the pressure falls below the needed point, the remedy is digitalis.

The final aim in all medical activity is to heal and to help. The practitioner has a right to measure progress in any branch of practical medicine by the benefits thereby accruing to the healing art.—Riegel.

THE DOCTOR'S OWN "CYCLOPEDIA"

One of our subscribers complains that in times of emergency he finds it difficult to locate the details concerning the latest and best methods of treating his difficult cases. He makes the interesting suggestion that in each number of CLINICAL MEDICINE we should print a résumé of the best in therapy relative to a certain specified disease, these résumés to be made a regular feature of the journal.

The doctor's suggestion is a good one, and it is possible that we may adopt it—in spirit, if not in method; for there are certain difficulties to be overcome if these "digests" are not to become trite and "textbooky"—if they should degenerate into the commonplace they would become worthless.

However, we take this occasion to remind our readers that the files of CLINICAL MEDICINE already contain exactly the information which the doctor desires. We believe that there is collected in these pages practically everything new regarding therapeutics, and especially drug therapeutics, that is worthy of preservation. The current medical literature of the entire world is scanned carefully by our editorial reviewers, and it is rare that anything of real importance escapes them. To this material, thanks to the "family," we are enabled to add the records of the practical experience of hundreds of our contributors, so that the pages of CLINICAL MEDICINE present a fairly complete as well as an exceedingly practical "cyclopedia" of what is newest and best in the healing art—the really "tried and true."

But no man can carry this in his head. Few can even locate it offhand, from memory. No man should try to do this—and especially not in an emergency. The doctor *should* have at hand, at his elbow, where he can put his hand upon them without a moment's loss of time, a collection of the indexes of CLINICAL MEDICINE. By referring to these, he can turn in a moment to the sources of information for the help he needs, and when he needs it—providing, of course, he has kept his files intact—as he most certainly should.

CLINICAL MEDICINE can be multiplied in value manifold, by preserving it and using it as is here suggested. Do not throw away a single copy. Preserve them all and use them constantly—the purpose of the index is to help you to do this. For those who have lost their indexes, we can supply back numbers, dating back to 1905, for the cost of postage and mailing, say 15 cents for the entire lot—as long as they last, for the supply is limited.

Courtesy and composure are mighty weapons in life: they make us superior to our opponents when they storm upon us.—Robert Gersuny.

A NEW THERAPEUTIC SOCIETY

As is well known, the doubt in the efficacy of drug treatment took its inception several decades ago in Vienna, from whence the resulting therapeutic nihilism spread through Germany, and then came, with other questionable blessings, to take footing in this country. Not long ago, however, the writer mentioned in CLINICAL MEDICINE that a therapeutic renaissance appears to be occurring in Vienna, the cradle and stronghold of therapeutic nihilism, and he expressed his satisfaction at the fact that deliberate, careful drug study and drug application was being revived.

On the 12th of June a first meeting of the "Society of the Entire Therapeutics" was called in Vienna, and it is significant that Professor von Noorden had given up the lecture room of his clinic for the purpose.

This meeting had for its purpose the organization of this society. It was opened by Dr. Kronfeld, editor of the *Wiener Medizinische Wochenschrift*, one of the originators of the movement. Professor Schauta was elected chairman, and a constitution and by-laws were adopted. After the business meeting, Professor von Noorden delivered a lecture on the prophy-

laxis and treatment of diabetic acidosis, a subject in which he is easily the leading authority in the world.

This new Therapeutic Society does not intend to come in conflict in any way with any of the existing scientific societies. Its purpose is to investigate modern therapeutics in all its branches and to discuss, in its ten to twelve meetings during the year, actual and practical questions. In the words of Kronfeld, its only purpose is to broaden and deepen the intense scientific work of the physicians in Vienna in the therapeutic direction.

He who has followed medical thought for the last ten or twenty years must be struck with the importance of this new undertaking. On a cursory examination of medical literature, not only in this country but also in England, France, Germany and Austria, the comparative dearth of theoretical and clinical drug studies is painfully evident. The writer had planned at one time to tabulate and classify the subjects of the doctorate dissertations published in Germany for the course of one year and to find out the proportion of drug studies. Time has, so far, not served, but we venture to say that five percent would be a hihg estimate.

It is the more a cause for congratulation that this definite movement has taken its inception; and although the new society will not limit itself to the study of drug treatment, but will take in all branches of therapeutics, there is no doubt that the aid to be derived from the deliberate and intelligent use of drugs will receive its full share of attention. That such a movement has become possible is in some measure due to the splendid work of Professor Ehrlich, even though this is one-sided in a certain manner, and also to the careful investigations of men like Schmiedeberg, Gottlieb, Meyer and others. Whatever the cause may be, we rejoice in the new movement and wish it success.

INEBRIETY A DISEASE

New York is preparing to open two hospitals to inebriates, the official definition of whom is as follows: "A person who is incapable of properly conducting matters or his affairs, or is dangerous to himself or others by reason of habits of periodical, frequent or constant drunkenness induced either by the use of alcohol or other liquors, or of opium, morphine, or other narcotic or stupefying substance."

Now that inebriety is generally considered a disease and not moral depravity, it is much easier to secure legal authority to treat these cases. In connection with New York's farm colony, these hospitals may be looked upon as likely to do much good. It is to be hoped that other states may follow the example of the Empire Commonwealth in this matter. The medical profession has long taken this view of the inebriate, but had no means of securing that control that was essential to a cure.

The next step is a law that will hang the man who habitually sells habit drugs without a prescription and the doctor who gives such prescriptions to habitués. No other punishment is adequate for the crime.

Life would be a perpetual flea hunt if a man were obliged to run down all the innuendoes, inveracities, insinuations and misrepresentations which are uttered against him.—Henry Ward Beecher.

ANOTHER WONDERFUL DISCOVERY

Edison, Wright, and all that bunch may now take their little talking and flying machines and go 'way back—a wonderful discovery has been made in the unexplored wilds of Asia that puts them all in the shade, and it presents several such exceedingly remarkable features that we hasten to present the facts to the medical profession.

This wonderful discovery is a medicine—and so far as we can learn it was not brought to this country by a returned missionary.

But let us not linger with the introduction—you must be anxious to know all about this wondrous cure. The essential facts are given in a letter from the makers and promoters to an Oklahoma physician, which has been placed in our hands. Read and be convinced:

"Replying to your favor of the 15th inst., we beg to say that SINKINA as sent out is an Elixir composed of granulated sugar,

distilled water, and 12 percent of the extract of the SINKINA plant which is, as previously stated, a hitherto unknown and as yet unclassified shrub found by us growing in Asia. It is an entirely new discovery in therapeutics, and contains absolutely no drug hitherto known to medicine. It is perfectly inoffensive, has no contra-indications, is most agreeable to the taste, and produces no toxic effects even when taken continuously and in the largest doses. Consequently, SINKINA marks an entirely new departure in the treatment of malaria.

"The active principle which makes SINKINA so valuable in the treatment of malaria is the presence of an aldeheide (not an alkaloid) and having no contra-indications, may be administered to the most delicate invalid with perfect assurance to obtain satisfactory results."

There is more in this letter, but it will take some time for you to digest and assimilate the preceding. Just let the facts regarding this remarkable remedy and its wonder-working "aldeheide" "sinkina" your soul. Some other time we may give you more.

The wise man must remember that while he is a descendant of the past, he is a parent of the future; and that his thoughts are as children born to him, which he may not carelessly let die.—Herbert Spencer.

SANATORIA FOR TUBERCULOUS PATIENTS

"We build sanatoria, spend large amounts of money, get the whole people aroused to the fight for humanity against the great white plague, and then return the patients to conditions which had much to do in causing the disease originally, although without the original soil might have remained innocuous. Is it rational, or in any way desirable? Let us change absolutely deplorable living conditions—lack of air, ventilation, sunshine, proper food, among the poor—and tuberculosis will be throttled as far as may be, but in no other conceivable way."

In the foregoing words, Dr. Beverley Robinson, in a recent contribution to *The Medical Times*, rather seems to belittle the importance of sanatoria and of the present fight in general waged against the greatest present enemy of the race, tuberculosis.

But is not Dr. Robinson going a little too far when he so positively asserts that sanatoria patients are returned to conditions which had much to do in causing the disease originally, and if he hints that the importance of environment is entirely lost sight of?

As a matter of fact, as to the second consideration, at least in larger cities every effort is made in this very direction—that is, toward changing the unfavorable environment under which the dispensary and sanatorium patients were made to succumb to the inroads of the tubercle bacillus. The district nurses and dispensary physicians all over the world are making heroic efforts in teaching the people in the lower strata of society how to improve their unfavorable conditions of life as far as is possible with the means at hand. That their efforts often seem in vain is due largely to social or economic conditions which can not be readily changed.

It would be foolish, indeed, to decry this important movement simply because we cannot at once produce ideal conditions. And is it not true that we can only hope to succeed—very slowly, it is true—by teaching the people how to lead reasonable and less unhygienic lives? Unfortunately this requires time; unfortunately ideal hygienic and sanitary conditions will not be brought about in our lifetime, nor in the lifetimes of our children and grandchildren, but should we, therefore, throw up our hands and neglect what little we can do toward the amelioration of conditions which we know to be productive of untold harm? Verily, that would be extremely foolish, and more, it would be criminal.

If we cannot do what we want to do, we should at least be willing to do what we can do, and thus make a beginning upon which those who come after us can continue, hoping and trusting that eventually the ideal may be obtained and that some time, even though only many, many years from now, diseases which are known to be preventable will be extinct, or at least so rare as to be curiosa. Speed the day when such happy conditions shall prevail!

Leading Articles

Minor Senile Ailments

And How They Should Be Treated

By I. L. NASCHER, M. D., New York City
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MUCH suffering among the aged might be prevented or relieved if a more general interest were taken in geriatrics and physicians knew more about the senile organism and its diseases. At present we dismiss these senile cases with the brutal diagnosis, "old age," and we confess, in making this diagnosis, that we do not know what to do and do not think it worth while to make an effort to do something which might relieve the aged sufferers.

"Old age" is a death-warrant, pronounced as a finality that leaves nothing more to be said or done, that kills hope, and absolves the physician from all further interest in the doomed individual.

And, yet, many a time a little more sympathy for the aged sufferer as well as a little more interest in the senile state would suggest methods or measures to relieve distress, even if they do not prolong life.

Take, for example, the old man's "rheumatics." In the vast majority of cases this is not rheumatism at all, but arthrosclerosis senilis, the condition I described under the name senile rheumatism.[1] It is a stiffening of the joint due to the senile changes, the hardening of cartilages, ligaments, and tendons, shortening of the capsular ligaments, fibrillation of the articular cartilages, and drying of the synovial sacs. It is not an inflammatory process, there is no edema or swelling, and the pain, which is slight when the joint is at rest, increases with motion. In chronic rheumatism, on the other hand, the joint gets stiff after prolonged rest, is painful when first moved, and the pain gradually disappears as the joint is "limbered up."

In the senile condition, counterirritants and rheumatic remedies do harm. The most effective treatment is to bathe the joint in warm salt water and, after drying, rub in an animal fat or oil; produce a mild hyperemia by means of massage, not by drug irritants. Internal medication is useless, and, as prolonged moving of the part increases the pain and also the degeneration, this should be avoided.

The "Asthma" of the Aged

Dyspnea, which the old man calls asthma, generally is due to emphysema or heart disease, rarely to bronchial asthma. If the attack comes on only after exercise, it is due to emphysema, and nothing can be done for it. If it comes on without previous exertion or is accompanied by palpitation, it is due to heart disease and the treatment depends upon the causative condition.

There is also a form of dyspnea, rather frequent in old age, due to gastric dilatation, the stomach being filled with food or gas, which presses upward against the diaphragm. This condition is relieved when the patient lies flat upon his back or belches up the offending gas. The treatment here is, to empty the stomach or to promote the dislodgment of the gas. Charcoal in tablet form frequently gives relief; it may advantageously be combined with sodium bicarbonate. However, the usual treat-

[1] *American Medicine*, December, 1911.

ment, that of giving alkaline waters, only increases the gastric contents and, as there is generally atony of the stomach and slowed digestion, osmosis, and assimilation, it makes the distress worse.

The Treatment of Constipation

Constipation is the most prevalent of the minor ailments of the aged, and is due to atony and waste of the intestinal muscular fibers. It is relieved by peristaltic stimulants. The best drug for this purpose is aloes or its active principle, aloin; if these drugs gripe excessively, however, we may try cascara sagrada, in 5-grain doses, or rhubarb, 30 grains per dose. In a former paper[2] I have referred to the counteracting influence of belladonna when combined with aloin.

The laxative salines are of service only in the obese, and they should not be taken by thin aged persons. A single dose may be given occasionally, to alternate with the vegetable cathartic, but the daily use of a saline, as is recommended by some authorities, is irrational, inasmuch as the salts do not promote peristalsis—and that is exactly the action required in the aged.

I am in the habit of prescribing a pill composed of aloin, strychnine, and sodium glycocholate, alternating with cascara sagrada, with rhubarb, and with the ordinary compound cathartic pills, occasionally changing to a dose of saline laxative, or, sometimes, olive oil at night and the salt in the morning. As there always is hepatic torpor, due to the senile changes in the liver, the bile-salts are given to stimulate the liver and supply the deficient bile.

Diarrhea and Other Senile Ailments

Diarrhea in old age almost always is due to dietetic errors, generally to excessive food or food taken in too frequent intervals. Regulation of the diet, the food being given in intervals of not less than five hours, will cure this condition, unless some chronic inflammatory condition is present. The old rule of feeding the aged little and often is responsible for these perversions in the intestinal functions and keeps the stomach constantly at work upon food in various stages of digestion.

For flatulence, nothing equals charcoal given at the end of the meal. Dribbling urine is due either to atony of the bladder or sphincter or to a hypertrophied prostate. If due to prostatic disease, surgical intervention is necessary. If the fault is in the bladder or sphincter, the urine should be drawn off by the catheter twice a day, while ergot and strychnine should be given as correctives. Ergot is contraindicated if there is arteriosclerosis. Hemorrhoids and anal fissures require surgical treatment. It is a waste of time to attempt to cure these conditions with ointments, as the causes persist and local medication in that region is very slow in action.

Senile Pruritus, and Bromidrosis

Senile pruritus is a common and obstinate ailment of the aged. I have encountered several cases in which the itching was due to unconscious mimicry or suggestion, the patient, seeing others scratch, doing the same unconsciously or through the suggestion of itching. The mere thought of fleas will make some persons feel itchy, and, similarly, the sight of one person scratching may arouse the sensation of itching in another. If we find such a history as this, harsh measures (disagreeable medicines or, maybe, threatening with a cold bath) may be necessary to cure the wholly imaginary disease.

The true senile pruritus as a rule is about the genitals, the anus, gluteal region or legs. It is supposed to be due to degenerative changes in the surface terminals of the nerves, but no such changes have been demonstrated.

No certain routine treatment for this condition is known. Washing with a 2-percent cocaine solution or, better still, inunction with a 2-percent cocaine ointment (using as vehicle an animal fat—lard, lanolin, sweet butter) will give temporary relief, while in occasional instances the itching will be permanently relieved. In some cases mild acid applications, such as diluted vinegar or weak carbolic-acid solution, have given relief, but in others they have aggravated the trouble. The

[2] "Dosage in Old Age," CLINICAL MEDICINE, July, 1911.

same experience I have had with alkalis, neutral salts, bland oils, irritants, hot water, cold water, alcohol, and other agents. In one case a 1 : 1000 solution of bichloride of mercury cured the pruritus, although no parasites could be proven. We must simply try one drug after the other and then, when we find that one gives temporary relief, "stick" to it.

Bromidrosis is an ailment rarely noticed by the patient himself because of the impairment of his sense of smell—a condition quite general in old age. The cause of the bromidrosis is unknown, but it is not due to uncleanliness, often being very pronounced in persons who take a daily bath. It probably is an effort of the system to eliminate the products of abnormal metabolism, and as such free sweating should be encouraged. When the bromidrosis is excessive, it may be controlled by the application, to the affected areas, of salicylic acid and powdered belladonna leaves. The offensive odor can be overcome by odorous spirits, such as cologne water, or by applying a 1-2-percent solution of potassium permanganate.

Ulcers of the Leg

Chronic ulcers of the leg are frequently met with, but these generally are neglected by the subjects. They heal very slowly in the aged, not healing at all if the surface is covered with a powerful astringent or antiseptic that coagulates protoplasm. The following procedure ordinarily will cure chronic ulcers of the aged:

Wash the surface with warm water, then with hydrogen dioxide, and this followed again by warm water. Now apply a 2-percent cocaine solution and a few minutes later destroy the surface slough with either a sulphate of copper or a nitrate of silver pencil. After a clean surface has been obtained, wash again with warm water, dry with absorbent cotton, then cover the ulcer with anhydrous lanolin.

The next step is to produce local hyperemia by applying hot dry cloths or dry-cups. This local hyperemia should be maintained for several hours. If the lanolin is absorbed in the course of twenty-four hours, it should be renewed. Mild hyperemia should be maintained as far as possible, preferably by placing a warm, dry cloth over the wound. If there are bleeding spots in the ulcer, they should be touched with some caustic. Do not use bichloride of mercury, carbolic acid or any other substance that destroys healthy tissue, except for the removal of slough.

I have tried nuclein and bovinine in some cases. They did not interfere with the formation of healthy granulation, but I am unable to say whether they hastened the healing process or not. Theoretically, both agents are beneficial.

Affections of the Feet

The aged suffer much from various affections of the feet. Sometimes there is a hypostatic edema after long standing, due to impaired return circulation. A rubber anklet will prevent this condition, but it should not fit tight lest it aggravate the condition. Other pedal defects, such as broken-down arches, hammer-toes, corns, bunions, callous skin, etc., require treatment. Callous cuticle should be rubbed down with sandpaper or emery paper, or with sand or pumice stone, or soap should be rubbed in together with an animal fat and the spot be relieved of pressure. The physician should know how to deal with the other conditions of the feet.

Senile Tremor

Senile tremor is an annoying ailment of the aged, being due, partly to lessened coordination, partly to muscular weakness. It is frequently mistaken for paralysis agitans, but there are absent the characteristic attitude, characteristic gait and facial expression, the muscle stiffness, and the difficulty of turning the head; and, then, in senile tremor the head is involved at an early stage, while it appears in the lower limbs only after walking.

The most serviceable drugs in this condition are arsenic and phosphorus. The arsenic, given preferably in the form of Fowler's solution, must be discontinued as soon as the unfavorable constitutional effects appear. The phosphorus, given in liquid form, in doses corresponding to

1-100 to 1-50 grain, three times a day, should be discontinued as soon as improvement is apparent; being resumed when the condition becomes worse again. Never give arsenic or ordinary phosphorus in pill form. [Our own preference, in giving arsenic, is to use it in the form of the arsenates, while we prefer the glycerophosphates or lecithin to the metallic phosphorus.—Ed.]

Dribbling saliva frequently accompanies senile tremor. This is not due to an excessive secretion of saliva, but to the dropping of the lower jaw, due to the waste and atony of the masseters and the flaccid lips. It is necessary to instil in the patient a sense of watchfulness and cleanliness and to induce him to keep his head up and his mouth closed. There is a great temptation to use drugs, like belladonna, to lessen salivary secretion, but we must remember that the total amount of saliva already is diminished and that our object must be to direct its flow backward toward the esophagus.

The Headache of the Aged

The aged frequently suffer from headache and the physician's first thought is of constipation. While this condition almost always is present, the most frequent cause of the headache is cerebral arteriosclerosis, with consequent cerebral anemia. Other causes that prevail in the aged are toxemia, resulting from constipation or renal disease, nervousness following excitement, excessive mental or physical exertion or the ingestion of toxic substances like alcohol or meat in the process of decomposition; occasionally there is a passive hyperemia, headache accompanying elevation of temperature or cerebral disease.

If the headache becomes worse upon lying down, it is a congestive headache. If it becomes easier when lying down, it is either a nervous headache or due to cerebral anemia. The latter is unaffected by light or sound, while the nervous headache is intensified by light or sound. The headache due to toxemias is not influenced by change of position. It is hardly necessary to speak of the headaches of fever or cerebral disease, as their diagnosis is simple. Frequently the history—precedent excitement, dietetic errors, alcoholic excess, constipation, and so on—will suffice to determine the character of the headache.

There are numerous other diagnostic points, for instance, the state of the pupils, a pale or a flushed face, vertigo (in arteriosclerosis and anemia), the location of the pain, tenderness of the scalp (myalgia); but the conditions pointed out will suffice to form a tentative diagnosis, which then must be corroborated by other symptoms and signs.

If a given disease is accompanied by fever as the etiological factor for the headache, the treatment must be directed specifically against that disease. In these cases the headaches are like congestive headaches. In congestive headaches, the head should be raised, cold water (not ice) should be applied, and a hot foot-bath given. If there is no arteriosclerosis, ergot in 15-grain doses, or 15 minims of the fluid extract, may be given. The coaltar preparations are contraindicated in old age because of their depressing effect upon the heart; still, if the heart is in good condition, phenacetin combined with ammonium carbonate may be given.

Anemic and Nervous Headaches

The anemic headache is almost always due to arteriosclerosis, and in this condition the vasoconstrictor heart stimulants are forbidden. The patient should lie upon his back, with the head low; hot applications should be made to the head, and the nitrites should be given. For rapid action, we can use the spirit of glonoin in 1-minim doses in a teaspoonful of water every half hour. [Or the glonoin granules, in equivalent dose.—Ed.] For continued use, sodium nitrite, in 1-grain doses three times a day, may be given. If the heart is weak, the foregoing may be combined with strychnine or digitalis. The latter should never be given alone if there is cerebral arteriosclerosis.

The nervous headache is relieved by lying prone, by protection from noise and light, besides bromides in fairly large doses. (No chloral!) In the toxemic headaches, the treatment depends upon their cause

and our ability to eliminate the same. Still, even if we are able to get rid of the cause—as for example fecal impaction, with consequent autointoxication—the headache generally will continue for some time. The treatment indicated for congestive headache will be beneficial here also.

Indigestion Frequently Present

Atonic dyspepsia commonly is present in the aged, and the treatment is twofold: to improve the condition of the organ, and the regulation of the diet.

In the condition named, food should be given in intervals of not less than five hours, and it should be as concentrated as possible; milk, eggs, meat juice, and cereals constituting the bulk of the diet. Predigested and partly digested foods are advisable, but most of the prepared liquid foods on the market contain so much alcohol that an amount sufficient for nourishing the patient will also keep him constantly intoxicated. Of the concentrated food-products, I like sanatogen best, not alone because it is a pure proteid, but it contains sodium glycerophosphate, a valuable nerve tonic for the aged. Tea, if properly made, is better than coffee. If a person is accustomed to wine, it should not be debarred; strong liquors, however, are forbidden. An occasional glass of beer will do no harm, as a rule.

The remedial measures in atonic dyspepsia, principally, are as follows: Strychnine or nux vomica and the bitter tonics, as stimulants; charcoal, if there is flatulence or belching up of gas; the enzymes, if necessary. Then, if there is gastric dilatation—a condition frequently associated with senile catarrh of the stomach—an occasional use of the stomach-pump, massage, and a binder are indicated.

The aged individual generally feels cold. This is a discomfiture which is rarely brought to the notice of the physician, yet is sometimes very distressing. This chilliness is due to the lessened surface circulation and changes in the skin, and it can be overcome by warm, close-fitting woolen underwear, hot drinks, inunction with animal oils or fats, together with light massage and hot baths.

Senile Debility

Senile debility, which the physician is likely to dismiss lightly with the verdict, "old age," can sometimes be overcome by psychic influences, by change of environment, scenery, and life routine, also sometimes by means of drugs. I am at present using the amorphous (red) phosphorus in 1-grain doses three times a day, in conjunction with arsenic, strychnine, hemoglobin, or other tonic stimulant, as the condition present may call for. This universally neglected condition most surely deserves attention, for the slightest benefit not only increases the economic usefulness of the aged individual, but increases his sense of well-being—a consideration no true physician ever should fail to remember.

If I Knew You

"If I knew you and you knew me—
If both of us could clearly see,
And with an inner sight divine
The meaning of your heart and mine,
I'm sure that we should differ less
And clasp our hands in friendliness:
Our thoughts would pleasantly agree
If I knew you and you knew me."

I can't know you, nor you know me—
The best in each we never see:
The clean, kind thought, the gentle word,
The melody of life, that's heard
Across the years. Some actions shine
That make hearts human seem divine.
From unkind word and action free
May I know you and you know me.

—Julian Heath.

The X-Ray as an Aid in Diagnosis

In Diseases of the Rectum and Other Portions of the Large Intestine

By J. RAWSON PENNINGTON, M. D., Chicago, Illinois
Professor of Diseases of the Rectum, Chicago Policlinic

WHILE the rectum is easily inspected by various specula, and the sigmoid is accessible, though less readily, by sigmoidoscopes, such as the one with insufflation as devised by myself, the colon is inaccessible and its exact position difficult to ascertain. Very often it is also difficult to determine and locate pathologic conditions in the large intestine.

Until recently the means of diagnosis have been limited to those employed in other portions of the alimentary canal; namely: inspection after dilatation of the bowel with air or water, palpation, percussion, transillumination. All of these methods are open to the objection that they are uncertain.

It has also been advised that a flexible cable be introduced into the colon. We know from recent researches, notably those of Soper, that, as a rule, the colonic tube does not pass beyond the sigmoid loop, owing to the mobility of the latter, and that it curls up in the rectal ampulla. It is practically impossible to pass the sharp bends at the splenic and hepatic flexures of the colon.

In June, 1899, I demonstrated to the American Proctologic Society, at Columbus, Ohio, the outlines of the stomach after giving the patient a bismuth meal.

I observed in the latter part of the same year that, by introducing into the large bowel some agent that would cast a shadow, the x-rays may become useful in making a diagnosis of conditions in the twin cavities.

It is only recently, however, that such procedures have become of practical value. About ten years ago Boas pointed out that these rays had not given very promising results. "I am convinced," he writes, "that we see certain portions of the large intestine—e. g., the descending colon—and especially recognize distinctly the haustra coli. It remains to be seen how much more favorable conditions will be created through the introduction of metallic sounds and the like into the rectum."

A bismuth meal is useful in diseases of the stomach or duodenum, the agent being suspended in milk, acacia water, thick soup or some similar vehicle. The food, immediately after ingestion, begins to pass into the small bowel, and, by the end of an hour or so, 25 or 30 percent of the amount is in the jejunum. But for examination of the large bowel, the passage of bismuth by mouth is very slow. One author estimates that it requires from twelve to fifteen hours for the bismuth mixture to reach the ileocecal valve, about twenty-four hours to gain the transverse colon, and thirty-six hours to penetrate to the sigmoid. By the method I advocate, this application of bismuth is accomplished, so to speak, instantaneously.

My method aids in the diagnosis of displacements and other congenital or acquired abnormalities, strictures, kinks, new growths, relative positions of the colon or sigmoid when the bowel is partly and completely filled, arrested descent of the cecum, a long mesentery, congenital dilatation of the colon (Hirschsprung's disease), impacted feces, hour-glass contractions, rectal valves, ptosis of the rectum, enteroliths, relative lengths and other dimensions of the various segments of the large bowel, and many other conditions.

It may also be resorted to for the diagnosis of chronic obstruction. In the acute variety, it may be less useful; moreover, in the acute type, the other symptoms should differentiate it. It will, no doubt, often be useful in detecting diverticuli; though, to be sure, the smaller sizes of these pouches are generally filled with fecal matter and thus prevent the entrance of the injection mass.

Fig. 1. Skiagram of Miss L. Age 24. Complained of constipation and pain in pelvic region, following operation, eight months before, for salpingitis and ovaritis. Subject to dysmenorrhea and had to stand to urinate. Mass palpated in left pelvic region. Radiogram revealed doubling of sigmoid.

Our friends, the urologists, for several years have resorted to a similar method in the diagnosis of affections of the genito-urinary apparatus, they injecting a solution of argyrol or some other silver salt before directing the x-rays. They have been so successful that a recent observer was able to see even the straight tubes of the kidney.

In addition to my personal cases, I have time to quote only the following instances of the utility of the procedure under consideration:

A Few Illustrations

The first is reported by Wiesner in a recent number of the Munich *Wochenschrift.* Four weeks after an interval operation for appendicitis, a patient had attacks of colitis with fever. After filling the large bowel with an emulsion of bismuth subnitrate in oil, radiography disclosed a diverticulum on a level with the cecum and connected with the principal mass of intestines by a narrow neck. The author concluded that postoperative adhesions were present, kinking the bowel and causing the formation of a cul-de-sac in which fecal matter was stagnating. The abdomen was reopened and the diagnosis corroborated. The adhesions were removed, and, later on, the bismuth-x-ray method showed a normal state of affairs to have been re-established.

A similar case, in some respects, is recorded by Tousey in *The Journal of the American Medical Association* of March 9 of this year. A woman of 41 had undergone two laparotomies, the first one thirteen and the other seven years ago. After the last one she was troubled with constipation and prolapsus ani to such an extent as to suggest a kink in the sigmoid or invagination into the rectum.

Fig. 2. Another skiagram of Miss L. taken after the application of a clip to the rectal valve. This had passed, relieving constipation somewhat but not helping otherwise. Later, opening of the abdomen revealed extensive adhesions around sigmoid, uterus and bladder. Surgical release of these caused great improvement.

After an injection of bismuth per rectum, the radiogram showed no abnormality, except a strikingly empty part of the transverse colon where it crossed the spine. A certain portion was permeable, but subject to such pressure as not to be distended by the bismuth mixture. It did not seem possible this pressure could be caused by a tumor without other signs being produced. Another possibility was that the pressure was due to the convexity of the spine, but no compression had been applied to the abdomen, and similar appearances had been observed in other cases. Therefore, the diagnosis became narrowed down to pressure from adhesions.

Laparotomy was performed so as to expose this portion of the intestine instead

Fig. 3. Skiagram of Miss P., age 23, treated for obstinate constipation and abdominal pains, greatly exaggerated during defecation. Three large abdominal scars, 4, 5 and 8 inches long, made in operations for suppurating appendicitis and cecal abscess. Skiagram taken after removal of largest scar (along left rectus), the entire intestinal tract and omentum being bound down by adhesions. Improvement followed, but a similar operation on the two other scars (on the right side) was required later. Skiagram shows colon normal, except for some kinking at the hepatic flexure.

of the lower part, as had been anticipated. An area of the omentum was found, 3 inches wide, bound down and firmly adherent to the transverse colon for about two-thirds of the circumference. This caused both compression and angulation, which were relieved by freeing the adhesions. The patient is now having movements of the bowels without a cathartic.

The Method of Obtaining Radiograms

Now to come to the technic:

The patient's bowels are first cleansed by means of laxatives and injections. He

Fig. 4. Miss N. Had been operated upon for chronic appendicitis and salpingitis. Extensive adhesions, causing obstruction and removal of portion of the small bowel. In the ascending colon is a large mass of feces which was not expelled by cathartics and enemas. Bismuth mixture did not pass beyond splenic flexure. Colon and rectum dilated.

is then placed in the knee-shoulder position, and from 25 to 30 ounces of the mixture used for casting the shadow is injected into the large intestine. For this purpose I use an ordinary irrigator and short rectal tip. A long rectal or colonic tube for administering the injection is unnecessary. After the suspension is injected the patient lies on his right side for a few moments, so that part of the mixture may pass into the cecum. He is then placed, either in a dorsal or ventral position, on the radiographic table and the picture is taken.

Instead of exposing a photographic plate, the fluoroscopic screen may be used. Obviously, however, a permanent photograph is better. With the improved methods now in use this requires but a few seconds' exposure, and can be preserved for comparison. In some cases, considerable information, especially in carcinoma of the colon, will be obtained by using the screen while the injection is being made. In such cases Haenisch has found that the flow is arrested at the site of the tumor, bulging out the bowel, then the injection suddenly passes on through the narrowed portion of the bowel in a thin narrow line.

The Radiographic Injection Fluid

In order for a radiogram of the colon to be secured, it is necessary that it contain some nontoxic substance that will not permit of penetration by the x-rays. While a number of substances can be used for this purpose, a 6- to 10-percent subcarbonate of bismuth emulsion is the one I have employed most.

Subnitrate of bismuth is poisonous, either from absorption of the nitrates or from impurities found in it. Sulphate of barium is considerably cheaper, but not so satisfactory. Kaestle used oxide of zirconium, but this has no advantage over the subcarbonate of bismuth.

In one of the recent books on diseases of the stomach and intestines, one written by Kemp—and, by the way, a most excellent work—this author states that "for locating the position of the colon, the Roentgen method is expensive and usually impracticable, as it gives no more information than that by inflation."

That this view of Kemp is not quite accurate will be shown, first, by the photographs, which demonstrate conclusively a much greater store of information than is possible with inflation. The thoroughness of the injection is shown by the fact that, if the appendix is not behind the cecum, it will often be found filled with the bismuth

and showing as a pinlike image. Moreover the injection mass sometimes even passes through the ileocecal valve into the small intestine.

Second, as regards cost, the following figures may be quoted in this connection:

Ingredients	$0.50–0.60
Plates (depending upon number and size)	0.75–2.00
Current, tube and developing	0.50–0.70
	$1.75–3.30

Any additional cost is for the technic and skill of the operator. We hardly see how one can consider this expensive or prohibitive.

It seems a temperate estimate of the advantages of this method would be that it is the means of getting information obtainable in no other way, as to the shape, situation, and caliber of the large intestine up to the cecum.

Fig. 5. Mr. B., age 28. Taken with the expectation of finding a normal colon. Gave a history of good health and regular daily evacuation until six weeks before, when he noticed sluggish action requiring cathartics. Skiagram shows beginning dilation of the cecum and in the hepatic portion of the transverse colon.

In conditions affecting the large bowel, it is not probable that we shall meet with so remarkable psychic effects as ensued in a patient of the Paris correspondent of *The Boston Medical & Surgical Journal*. This was a young woman with symptoms which were decidedly unexplainable, and she was referred to a radiologist for examination, as to whether she had some malformation of the pharynx or esophagus. As a result, she was radically cured by the moral effect of this—to her—altogether unknown and mysterious procedure.

31 North State St.

High-Frequency Modes and Apparatus

By HOMER C. BENNETT, M. D., M. E., Lima, Ohio
Secretary National College of Electro-Therapeutics

THE most recent additions to our electrotherapeutic resources are the socalled "high-frequency," or "high-voltage," modes. They are generated by means of either a static machine or an induction coil.

These modes possess hardly any volume or strength, but an exceedingly high electromotive force, or voltage, reaching into the thousands and even to the hundreds of thousands of volts, with almost incalculable frequency of alternations—and for this reason are known as the "high-frequency" modes. This name was applied by Tesla, to whom we are indebted for our knowledge of the subject.

To increase the electromotive force, or voltage, of a mode produced by a static generator or an x-ray coil, an additional coil is placed in the path of the electric discharge. By induction, another mode is generated, and this may be still further increased by another coil in series. This is called a "step-up transformer."

Such a coil, when properly wound and placed in the static-mode circuit, will deliver a mode entirely different in action and effect from the generating mode. This is called a resonator, and is the result of the work of Oudin and D'Arsonval. Anyone having a static machine may add such an apparatus to his outfit, and get the high-frequency modes, at small cost.

This resonator-mode behaves in some respects like the static mode, but without many of its disagreeable features.

The ease of application of these modes and the decided and prompt results derived therefrom make these modes especially attractive and valuable to the electrotherapeutist.

The applications may be made either through the clothing or direct to the bare skin, according to the effect desired.

As the static machine is cumbersome, expensive, and not portable, the smaller and lower-priced Tesla coils are more popular, and they are the socalled "suit-case" coils. These deliver, really, a combination of modes, and are so arranged as to give, besides the x-ray, Tesla, and D'Arsonval-modes, also the high- and low-voltage sinusoidal and the thermofaradic modes, as well as circuits for diagnostic and cautery work.

The pressure and frequency may easily be regulated by proper switches, so as to be adapted to all indications.

The absence of amperage renders the modes safe, with millions of volts, and, with such great stress, the air is no longer an insulator, and the effects are seen at a distance, with or without conductors.

A completed circuit is not necessary, as the treatments may be given with either terminal alone.

There is a marked difference in the phenomena, effect, and feeling from the different poles. Vacuum-tubes placed near either pole will light up and glow, and, if connected direct, will light up more strongly; if brought near to or in contact with the body or some capacity, they will emit an effleuve, spray or sparks, and when placed in front of the screen of a fluoroscope, will show the emission of the ultra-violet rays.

These rays have considerable penetrative power, and, on account of their ease of generation and safety of application, are more valuable in some instances than the x-rays.

They may be applied internally as well as externally. They are analgesic, anesthetic, and antiseptic. They affect the blood supply, through the catalytic action on the vasomotor nerves, and have a marked effect on circulation, nutrition, absorption, secretion, and excretion. Their antiseptic and bactericidal power is due, probably, to the ozone liberated, which oxidizes the microbes. High-frequency modes, therefore, are useful in parasitic skin diseases, microbic infections and suppurative conditions.

The affections most amenable to these modes are pulmonary consumption; tuberculous ulcers, glands, and joints; gleety, gonorrheal, gynecologic, and also urinary troubles; cutaneous, cancerous, and lupoid diseases; rheumatic, gouty, arthritic, and lithemic states; and, lastly, nervous affections.

The glass vacuum electrodes are of different degrees of exhaustion, and, when energized, will glow with colors ranging from bluish to pink or even white. The purple color indicates the lower vacuum, and is the one to use for superficial applications. When deeper effects are desired, those showing a pink or white glow are to be employed.

When the electrode is not in contact with the skin, it will glow faintly; but, when in contact, will deepen in color and will emit a shower of fine sparks, and, with a strong mode, will get warm or even hot; while, if held on the surface, it will blister. Ozone will be generated and will penetrate the skin, so that it will not wash off, and may be smelled there the next day.

When the tube is attached to the positive pole, the distal end is most violet, and the proximal end will show a greenish fluorescence. With the negative pole, the proximal end is most violet, and the distal end shows the greenish fluorescence. The positive pole, applied to the wrist, produces tonic spasm of the flexor muscles, and is most felt in the forearm. The negative pole, applied to the wrist, is most felt in the hand. Applied to the forehead, with a very short spark-gap, either pole causes much drawing and stinging pain, even with the hand placed between the electrode and the skin.

A strong application caused an intense frontal headache for several hours, so that much care must be used in applying strong modes to the head and superficial nerves.

The negative pole applied to the nasal mucous membrane caused stinging and pain in the upper teeth, with sneezing and increased secretion. It feels like a "bad cold." The positive pole to the nasal membrane produced no pain or sneezing, but in a few minutes there was the same sensation as if the nose had been sprayed with a cocaine solution. The secretion stopped and the congestion disappeared, and the "bad cold" was cured in a very few minutes. There was a strong smell of ozone.

These modes follow the same laws of polar effect as do the dynamic. The positive is soothing, sedative, and constringent. The negative is stimulant, irritant, and congestive.

Various Methods of Applying the High-Frequency Mode

There are several ways of giving the high-frequency-mode treatments, as shown in what follows.

Autoinduction.—The patient, or merely the affected part, is surrounded by a coil of wire through which is to be passed the high-frequency mode. The patient's body is not in contact with the coil. The body is "soaked" in this rapidly fluctuating electrostatic field, with a varying stress, which agitates its every corpuscle.

Autocondensation.—The patient reclines on a couch or sits on an insulating pad, over a metal plate placed beneath and connected to one pole, the other being applied directly to his person. In this way, the patient becomes a part of a condenser.

Resonator Treatment.—In this, a coil is connected to one pole of the apparatus, with a spark-gap in series. The electrode is attached to the open end of the coil, and this is applied to the patient. In this treatment only one pole is used. The other pole is grounded, to increase the potential.

Two-pole Method.—One pole is attached to any electrode, either a bare-metal or wet-covered one, in contact with the bare skin; while the other is applied to the part to be treated, paying attention to polarity. Glass vacuum electrodes may be used.

Single-pole Method.—This is the most often used, and may be given with any kind of electrodes. With the ordinary electrodes, the high-frequency mode is given, but with the glass vacuum electrodes the ultraviolet rays are given. This is a modification of the two-pole method. Only one pole is used, the other being grounded or

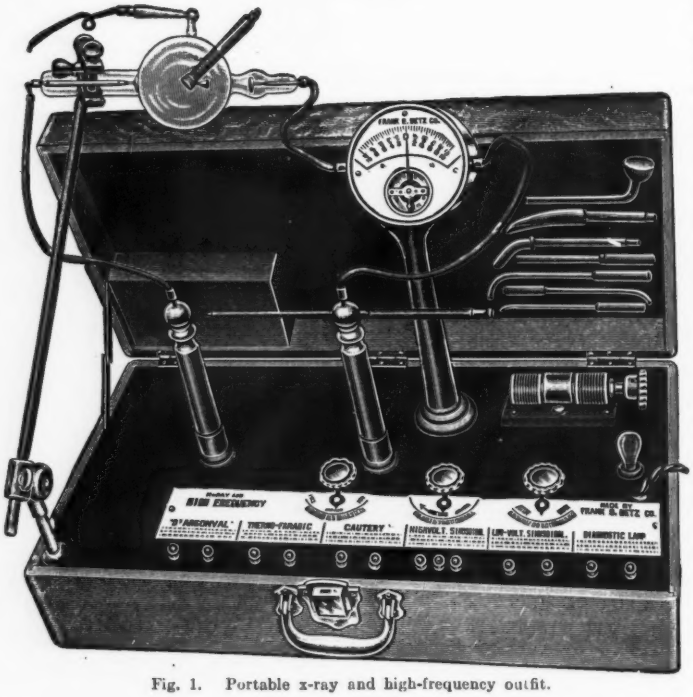

Fig. 1. Portable x-ray and high-frequency outfit.

not, as may be desired, to increase the potential, or not.

Description of a Serviceable Combination Apparatus

We show here a new model in x-ray and high-frequency portable coil outfits having some important improvements, chief of which is the milliamperemeter, something so far not attached to any portable coil.

With this coil, fully ninety-five percent of all ordinary x-ray work may be done in a satisfactory manner, both therapeutic and radiographic.

In addition to this important feature, this apparatus will deliver the following high-frequency modalities: the thermo-faradic, d'Arsonval, Tesla, and the Oudin, using the ordinary electrodes and the glass vacuum electrodes, from which we may derive the ultra-violet rays.

The dermo lamp, which produces the rich actinic rays, may also be used with this coil. The autoinduction and autocondensation treatments may also be employed. This outfit also delivers both a high- and low-voltage sinusoidal mode, a cautery mode, and another for lighting small lamps for diagnostic and transillumination purposes.

All these and other combinations are derived from this portable outfit, by simply connecting the plug to the ordinary lamp-socket of either the direct or the alternated lighting service; but the sinusoidal and the cautery modes are only had with the alternated circuit.

While some of these portable coils are made to be used either with the direct or the alternated mode, and in fact some are so constructed as to be used on both, still, the best results follow when the alternated street-mode is used. Therefore it is advisable, when only the direct mode is available, to get a rotary converter, which transforms the direct into an alternated or sinusoidal mode, and then use a coil adapted to that mode. The extra expense is more than offset by the increased efficiency in x-ray and high-frequency effects; besides, with the transformer, you may get the sinusoidal and cautery effect, also.

The addition of the milliamperemeter, which shows how much of the mode is passing through the x-ray tube and the other electrodes, is a new departure, and is a great advance toward the goal of accuracy in treatment and uniformity of result, as it eliminates guesswork.

Electrotherapy is emerging from the realm of guesswork, into that of knowledge, which is so essential to success.

The coils are all well insulated and guaranteed against short-circuiting, "burn-out" or "break-down," and are built in series with a powerful four-section condenser, which is guarded against overheating by a self-cooling device.

All the various modes are easily selected, controlled and regulated by knob-switches, and calibrated scales, printed in large type, so as to be easily read at a glance; besides, any change may be made readily and quickly, as occasion may require.

The tube-holder is adjustable to any position or angle for x-ray, radiographic or therapeutic treatments, by placing the apparatus on a table or chair near to the patient.

The meter is mounted on an insulated swivel-fork, and has three scales, registering from 0 to 10, 0 to 100, and 0 to 1000, and is always in plain sight when needed. It can be quickly removed and packed away when not in use.

The primary regulator for the high-voltage mode is divided into seven sections, and controls the mode from 0 up to 500,000 volts.

The low-voltage regulator controls, gradually, the mode for sinusoidal and diagnostic work, from 0 up to 110 volts.

There is a small safety, or pilot, lamp always in plain sight of the operator while at work, which also serves to illuminate the switchboard when working in the dark. (See No. 5 in the diagram.)

The case is 25 × 14 × 7 inches, made of the best kiln-dried quarter-sawed oak, with a strong carrying handle, and weighs about sixty pounds, and has a space in the lid to receive the accessories, except the x-ray tube and meter. It may be taken to the hospital or hotel, or to the patients' home, and operated wherever the commercial light service is installed.

The sketch in illustration (Figure 2) shows the scheme of the construction and wiring of this apparatus in detail, with a description of the various coils in the center and of the therapeutic uses shown at the right; while the numbers corresponding to those on the switchboard are shown in the lower left-hand corner, with the wave-lines in the left-hand column showing the scheme of the various modalities.

In the left-hand column at the top, we see the sine curve, which represents the usual form of the sinusoidal alternating mode, derived from the primary street service, which is the common one of 110 volts and 60-cycle form. Just below it, we see the same curve, illustrating the same mode after passing through the transformer, which changes it to a secondary sinusoidal that has been "stepped up" to a mode of 15,000 volts, but with the same 60 cycles.

The low-voltage sinusoidal, being a powerful though painless muscular stimulant, is very useful in such relaxed conditions as we find in prolapsus, subinvolution, constipation, etc. The high-voltage sinusoidal, in addition, has decided analgesic properties, and is useful in dysmenorrhea, ovaritis, and nervous conditions of the spine and pelvic organs.

The other three curves show the oscillatory modes of the thermofaradic, having a high amperage and voltage, running up to 15,000 volts and a periodicity of from 200 to 1000 per second.

The d'Arsonval mode has a high amperage and frequency, and a still higher voltage, going up to some 25,000 volts; while the lower curve shows the Oudin and Tesla modes, with a very low amperage and exceedingly high frequency, and a voltage of up to 500,000.

Figures 11 and 12 show the d'Arsonval mode connected to a 100-candle-power lamp, with a capacity of some 3000 milliamperes; which means that a lamp of this size and capacity can be lighted by this circuit and mode when the coil is being operated to its full power. Such a dose would pass through the patient, when placed in this circuit, if he had precisely the same resistance as the lamp. This shows the great power of this mode, and why it produces such remarkable effects on metabolism when used in the autocondensation treatment, with the couch or with the autoinduction pad.

The vacuum electrodes may be used with any or all of these various modes.

A very useful electrode may be made from a split bamboo fan or the common whisk-

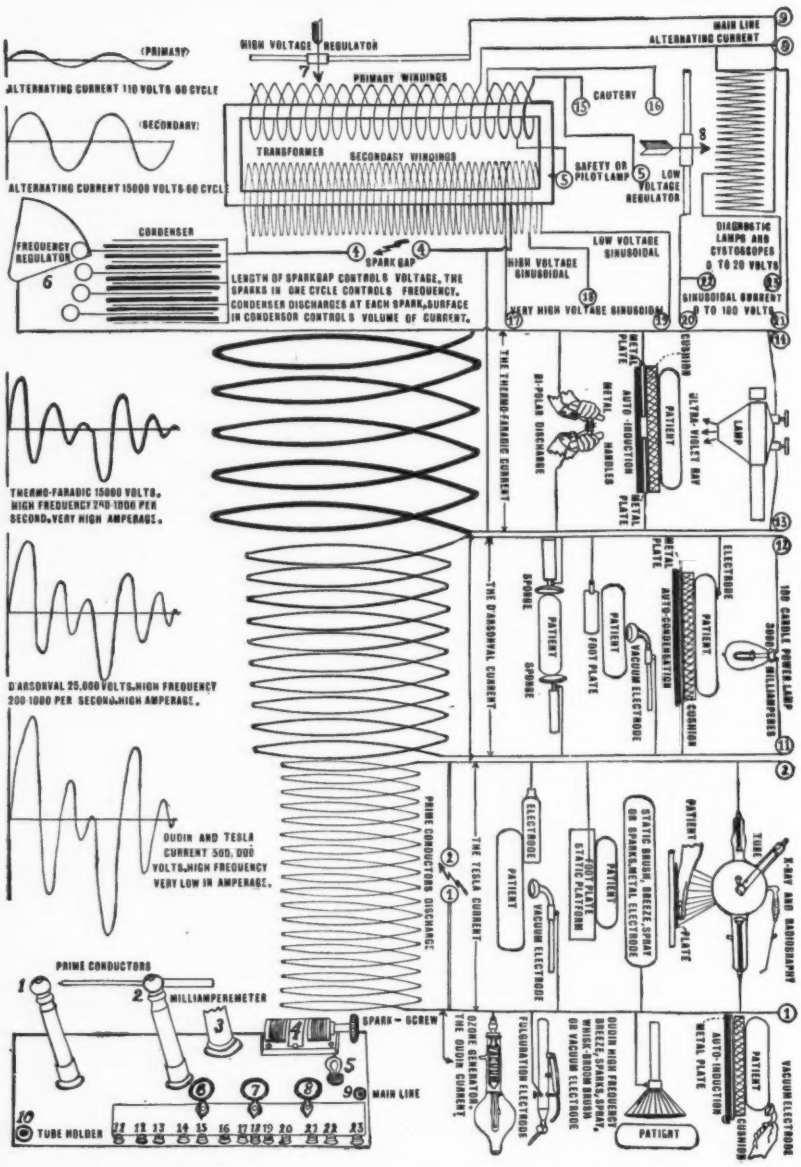

Fig. 2. Portable x-ray and high-frequency outfit.

broom when moistened with water and used as a brush or spray.

The accompanying full-page diagram (Figure 2), if carefully studied, will give a full understanding of the various coils, circuits, and the many ways of applying the different modes in diagnostic, cautery, x-ray, and therapeutic work. This diagram is so complete that it needs no further explanation.

Tissue Diagnoses and Tissue Pitfalls

From the Records of My Private Laboratory

By B. G. R. WILLIAMS, M. D., Paris, Illinois

EDITORIAL NOTE.—This is the eighth paper in Dr. Williams' very interesting series of articles upon "Surprises, Delights and Curiosities Encountered in Medical Laboratory Work."

DOCTOR, were you ever blamed for something that was no fault of your own, but a fair demonstration of some other man's want of knowledge? And did you ever remain in the dark as to the real condition of affairs—say, for several years—and finally learn what a big "gump" you had been all the time?

A few years ago, we received by mail, an ounce bottle of dilute formalin. In order than no injustice may be done, I might add that there was found floating in this liquid something that might have been mistaken for an inch of white thread, No. 16.

Though no word accompanied the specimen, we surmised that a tissue examination was expected. A study of sections from this white string revealed an edematous connective tissue, many fat-cells, a few pus-cells,—but water, water, everywhere. We stated as much and asked for some explanation, but received no hint as to what had been desired.

About six months later, we met this doctor. There was an expression about his eyes that caused us no little uneasiness; but reference to the bottle of formalin was avoided. Finally, however, he told us the truth. Said he: "Well, your 'dropsy' case has died of cancer of the breast," and then went on to explain that the tissue had been picked from an ulcer of the breast and, supposing that we could deduce the proper diagnosis he had sent it to us.

Now, this doctor was a man of intelligence, and an explanation and a personal examination of a section that had been filed made clear to him just where the trouble lay. An ulcerating area over a tumor invariably signifies the presence of retrogressive processes; and such bits as are cast off are already dead. It follows that the specimen must include deeper tissues if the cancer-cells are to be identified and that this should be removed under a local anesthetic.

But here is another instance. I know a physician who once submitted to a distant laboratory a piece of tissue to be examined. The pathologist, who is considered an authority and who does not live very many thousand miles from the city in which CLINICAL MEDICINE is published, promptly wrote back, asking as to the origin of the tissue. As I recall, the advice to be offered would depend upon the location of the trouble. Indeed, the responsibility for such usually falls on the pathologist. But what did this doctor do? He concluded that the other man did not know his business, and so failed to answer the letter.

Information Supplied by the Physician

I believe that every pathologist takes pride in his ability to interpret as much as possible from a tissue-picture. This should usually tell a definite story—tell the position of the lesion, its nature and its history. But it sometimes fails to do all this; and in such case, as much information as possible should be supplied by the practitioner—for the sake of the patient.

It must be recalled that a process which may be normal in one portion of the body becomes a pathologic one in another. An affection that in some regions is benign, when located in others, assumes a malignant character. The normal tissue may be literally "shot to pieces." The worker may desire to use special stains to bring out diagnostic details; and, if the tissue sample is small, he may waste it upon the worthless procedures, unless he has some clew upon which to guide his technic.

Then, after all, the pathologist is, or should be, a physician—a medical consultant, if you please, deserving of the courtesies which are extended to other men in our profession. We hasten to enlighten the surgeon who is called in to discuss with us our case of appendicitis, or the ophthalmologist who meets us in colloquium. The day there was when we were not sufficiently trained to apply such knowledge as the expert gave us, to diagnosis. Now we are all pathologists and all practitioners. Here and there some man may give more time to one part of medicine at the expense of another—our part, perhaps—but his advice in his special subject, is but that of a colleague.

The Average Tissue Analysis a Delight

It is the accepted opinion among diagnosticians that tissue analysis usually is a delight—although this term may not convey the proper meaning to the uninformed. To find carcinomata in the breasts or our sisters or wombs of our wives; tuberculosis in the hands of our brothers; actinomycosis in the neck of "the little Helen next door"; or epithelioma on the lip of Grandpa Bines, who made willow whistles for us when we were but a kid, makes us shudder when we see the microscope that told us these dreadful secrets.

And, yet, this exact knowledge constantly proves a delight. Less opposition to the surgeon now; he brings his cures, radical it is true, yet the more wonderful, to these dying ones. Ah, here are laboratory delights, indeed!

Even as the microscope has classified pulmonary tuberculosis, stamped out malaria, and stifled many other plagues of internal medicine, so has the science of surgery recognized as its truest friend this wonderful instrument. If I were to recount those lives which have been saved by a certain microscope with which it has been my good fortune to be acquainted, I should begin with a recital of one of five similar instances. Listen:

A Life Saved by the Microscope

A wife, who apparently had passed safely the climacteric, observed the presence of a putrid, sanguinolent, vaginal discharge. A surgeon, a true physician, who operated not solely for gold but for reputation and human life, was called, and, after an examination, expressed the belief that a cancer of the cervix was present, and advised operation. This suggestion was met by a flat, almost insulting, refusal. However, realizing the risk of delay, the surgeon insisted, explaining fully the nature of cancer and foretelling the ultimate result of procrastination. The woman became interested.

"If," she ventured, "you could assure me that this is a cancer, I should not hesitate; otherwise I cannot agree to an operation. Can you do this?"

"Well, no, I cannot swear that this is a cancer but—yes, I can."

The surgeon said, "I believe that this is a cancer." The microscope said, "This is a cancer." The woman—she is but one of several—listened to the microscope, and is well today.

I know of no field of diagnosis which has been so highly perfected and made so reliable as the microscopical examination of uterine curettings; and, while I could give many other illustrations, I shall merely point out a few important facts.

Uterine Curettings

1. An examination of uterine curettings should be made whenever any possibility of cancer exists.

2. When curettage as a curative measure follows *abortus incompletus*, microscopic examinations should be carried out to determine, if possible, whether or not the proper tissue is being removed, etc.

3. In all inflammations of the endometrium, an examination of the scrapings may give a clew to the proper treatment.

4. If the location of an inflammation is not evident but may be present either in the tubes or the uterus, ascertain, if possible, whether the lining of the latter really is involved.

5. The cervix is the seat of many and varied diseases. Do not conclude that the slick areas of red are invariably simple erosions; that the velvety mass is a harmless papillomatous growth or that the

lump is a blocked and distended cervical gland. *Don't guess here.*

6. A single section of the suspicious-appearing polyp may show nothing abnormal, while others may demonstrate that rods or wedges of flat epithelium, normally investing it, are being driven into the deeper tissues.

Guessing at the Adenopathies

In the chronic adenopathies, we have opportunity for the tissue diagnosis. Here is a class of diseases that can rarely or never be differentiated upon symptoms and signs alone. Now and then a clever guess may be made; but the man who rests satisfied upon this method of diagnosis eventually comes to grief. He removes the glands of leukemia or administers tuberculin in Hodgkin's disease. I have recited an account of one of these instances, in my previous communication upon blood analyses. On the other hand, blood and tissue analyses classify properly every chronic adenopathy. The former differentiate the lymphosarcomata and the leukemias, while the latter distinguish tuberculous adenitis, syphilis, and Hodgkin's disease.

What of the breast tumors? The surgeon usually is forced to answer this question, and the microscope often is omitted. Nowadays we do not always insist upon the removal of a bit of the tissue for diagnostic examination—leaving in the remainder of the growth—but if the patient is willing, remove the entire tumor, the breast, or the breast and all tissue that may be secondarily involved by daughter tumors; the choice depending upon several factors, as I shall show below. It may be said that many circumstances usually arise to alter any advice the surgeon would like to give.

While we are loath to take chances with carcinoma, it is hardly fair to remove all pectoral and axillary structures in every breast tumor, regardless of age or of the duration and history of the disease. Such rules as will follow must be modified still further, not only to suit the needs of the case at hand but also the whims of the patient.

1. *Every tumor from the breast, removed wholly or in part, should be sectioned and examined under the microscope.* A proper prognosis is quite as valuable here as a correct diagnosis in many other fields of medicine. Now, if this neoplasm proves a harmless fibroma, the patient should willingly pay for the cost of the examination. Certainly a cloud is lifted. But, if the operation has been partial, and the microscope reveals the deadly nature of the tumor, she usually accepts the "last hope." Because tumors are mixed, because they may be hard or soft and still be either malignant or benign, and because degenerative processes alter the appearance of these growths, I should in every case caution the operator not to rely solely upon gross appearances. The surgeon who has had considerable experience usually makes a good guess; still now and then, as I shall illustrate later, he fails.

2. The patient may insist that a portion of the tumor be removed under cocaine, for microscopical examination; agreeing that, if it is benign, it must be removed, but, if malignant, a radical operation be carried out. In certain cases, especially of young ladies, this plan should usually be followed.

3. It is advisable where possible to remove one or two glands for examination, even though the tumor appears to be encapsulated.

The question usually resolves itself into a choice between:

1. One radical operation.
2. Removal of primary tumor or breast, with the possibility of another operation, depending upon the microscopic findings.
3. Cocaine anesthesia and removal of specimen for examination, the choice of the major operation to depend upon this.
4. One general anesthetic with choice left to the surgeon during the operation. In hospitals, frozen sections of the tumor are examined by a rapid method; and, if the growth is of a malignant nature, the operator proceeds with the radical dissection before closing the wound.

To show that too much dependence must not be placed on the gross appearance of the tumor, I shall give two examples:

In one instance we received a "fibroma," which turned out to be a carcinoma of a scirrhous type. At another time "a medullary carcinoma" was sent to us, which proved to be myxomatous degeneration.

Educating the Laity

"Doc, I have not been feeling well lately."

"What seems to be the matter, John?"

"That's what I want you to tell me. You're the doctor, aren't you?"

It is a safe proposition that this chestnut is sprung on every practitioner several times a month.

"Why, Doctor Haws use'ter just look me over and ask no questions; and he allers hit it—yes-sir-ee!"

But people are rapidly learning that diagnosis has become a science in which not only a thorough case history is advisable but often means more than the physical examination. Incidentally, they are beginning to realize that a squint at the tongue, a squeeze of the radial artery, and an abdominal massage do not make up diagnostics, all in all. And, in bitter truth, it must be blurted out that often they grasp these facts before some Catskill doctors waken from their long, long sleep.

Now and then, however, a sluggard drops behind the world:

"I fail to see," acknowledged one sincere old gentleman, "how a microscopical examination of that cancer on my lip benefited me. It seems that the doctors used the information and should pay for it."

"Just a word of explanation," replied the surgeon, "will, doubtless, make clear to you who really gained. By the naked eye, it is often impossible to distinguish just how deep and in which direction the cancer extends. One bit—a root—left behind, grows again. If we can be certain by a microscopical examination that a large zone of normal tissue surrounds the cancer, who has gained?"

"Well, I'll be gol darned," agreed the old man. "It's funny how doctors have changed since Doc Haws use'ter practise." He dug a dirty money sack from his pocket—"It beats all."

Next Paper: "Bacterial Criminals and Medical Sleuths."

The Treatment of Constipation in Children

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—This fine discussion of a much neglected topic really owes its existence to the suggestion of one of our readers. We hope that other readers, who will read Dr. Candler's article and enjoy it, will be inspired to send us equally happy ideas for elaboration.

CONSTIPATION must be regarded as a symptom and its causes sought for and treated; only when we understand its etiology can we hope to secure a permanent cure. It is a very simple matter to control the condition temporarily and by the aid of laxatives or cathartics produce two or more loose stools daily; but when such medication ceases the constipation returns, and usually the last state of the unfortunate little patient is worse than the first.

Every degree of constipation may be observed among children. Some nurslings practically never have a normal stool, each defecation being secured only by the insertion into the bowel of soap sticks, gluten suppositories, glycerin, soapsuds enemas, and so on. The impacted feces often are voided only after an immense amount of straining, the infant's face during the procedure becoming purple and its clothes saturated with perspiration. Not infrequently the enormous fecal mass is streaked with blood from lacerations of the mucosa; naturally, fissures or, worse still, prolapsus ani will ultimately result. Every physician doing a general practice

has been asked by distracted mothers to put an end to just such conditions, but, alas! has too often found all his efforts unavailing.

Older children are usually more or less constipated; some have a daily stool, but fail to evacuate the bowel thoroughly; others—and girls are the worst offenders—visit the toilet only when the outraged intestine refuses to bear its load any longer. Several children coming under my observation have confessed in the most matter-of-fact way to having only one to three motions a week.

In such cases the administration of cathartics but aids in establishing abnormal intestinal conditions that will persist as long as the patient lives and render existence a burden. True, it may—probably will—be necessary to resort to drugs for the purpose of thoroughly emptying the bowel, but this desirable condition once obtained, proper feeding, exercise, and stimulation of the sphincters, together with the exhibition of bitter tonics, will prove most efficacious. Naturally, cases are observed in which the temporary use of laxatives is necessary, but that physician will be most successful who gives them only after a careful study of the individual, selecting the drugs most distinctly indicated, and giving them only for the shortest possible time.

Nothing is more unscientific than to drug constipated children in routine fashion with haphazard cathartic combinations. Fully as undesirable is the offhand prescribing of glycerin, gluten or soap suppositories, useful as all these agents are in appropriate conditions.

Conditions Giving Rise to Constipation

It must be remembered that the length of the infant's convoluted intestine favors retention of feces. The sigmoid especially is usually thin, long, and distended, not infrequently filling the left abdomen. More or less pyloric stenosis may exist and the food pass very slowly into the bowel. This condition is marked by extreme distension after each feeding ("pot-belly"), flatulent colic (sometimes severe enough to cause convulsions), and obstinate constipation. Lack of proper nervous tone causes, more often than it is caused by, constipation. Hepatic inactivity and a deficiency of intestinal secretion frequently are at the bottom of the trouble.

Children improperly fed and deprived of sufficient exercise are almost sure to be constipated, for, not only are the intestines atonic, but the muscles generally are undeveloped and unable to respond effectively to normal stimuli. Unfortunately, overattentive but uninformed mothers many times produce constipation in their little ones: (1) by over- or underfeeding; (2) by failing to provide the child with sufficient water to drink; (3) by giving "soothing syrups"—which almost always contain opium in some form—or "household laxatives"; (4) by administering, at any convenient time, rectal irritants, such as soap-sticks, glycerin or soap-water enemas.

Naturally, the infant or young child sinned against in all these directions (as many are) is apt to suffer from the most aggravated form of constipation. Defecation has always been to him a very painful process. Any natural desire to defecate is repressed and the bowel is evacuated only when forcible measures are employed.

Sooner or later the child passes out of the mother's or nurse's hands and is then supposed to attend to these matters for itself. Instead of going to the toilet at a regular hour each day, this visit is deferred to the last moment possible and the contents of the rectal ampulla are then voided only after prolonged and painful efforts. Hemorrhoids, fissures, proctitis, and, in girls, uterine disorders quite naturally follow, and, unfortunately, continue for years without receiving proper attention.

Should, by and by, the child complain or the mother be particularly observant, the "constipation is treated"—usually with a few doses of some purgative medicine; but, as it persists, it is eventually regarded as an "undesirable private affliction" which probably will disappear with maturity. This *may* happen if with maturity some knowledge of personal hygiene is gained and applied; but then, often, it is too late to remedy the systemic wrongs inflicted

which may be of a most serious character. The physician can do no greater service to his clientele than to prevent and treat intelligently—where it exists—constipation in infants and children.

The "symptoms of constipation" need not be described, but it is perhaps well to point out that the passage each day of merely a few hard fecal masses decidedly does not mean an emptying of the bowel. Children who suffer from flatulence and colic (especially at night), who are restless and feverish or tossing about and moaning or grinding their teeth during sleep, as a rule are suffering from fecal retention. Profuse perspiration of the head is another almost positive sign of a loaded bowel.

Not infrequently a child previously well will become feverish, vomit, and perhaps have a convulsion. Here prompt and thorough evacuation of the intestine causes immediate disappearance of the symptoms —the *cause* has been discovered and removed. Maintenance of bowel activity will almost invariably prevent a recurrence of an attack.

Enough has been said to prove that the treatment of constipation is far from being a simple procedure, although, once the physician masters certain essentials, success will attend his efforts in practically every instance.

Study the Food Supply

In infancy it is most essential to study the food supply. Insufficient fat and excess of proteids are common in breast-milk, and bottle-fed children frequently suffer from a deficiency of both. Sterilized and pasteurized milks unfortunately are prone to cause constipation. Children in the second year often fail to receive a sufficient supply of starch and sugar. Thus it is obvious that in the case of a constipated nursling it is not medicine that is needed so much as properly proportioned food.

When the patient is a nursling, *examine the milk.* It is usually impossible for the doctor to do this work himself, but perfectly equipped laboratories are now maintained in every city of any size, and a report upon any specimen furnished can be secured in from twenty-four to forty-eight hours.

The modern textbooks on pediatrics contain excellent percentage and feeding tables, Spach's "Handbook of Infant Feeding" being particularly useful in general practice. With a knowledge of the constituents of normal milk, the proportions of fat, proteids, etc., required by the ordinary child, the conditions presenting in any particular case, and the laboratory report upon the food supplied, it is not difficult to outline effective treatment.

Where the deficiency is known to be fat, one or two teaspoonfuls of cream may be ordered given after each feeding, or olive oil may be given internally, by inunction or even per rectum. Water or, better still, oatmeal water, should be given freely several times daily. The mother's diet will require attention, especially where the milk is poor in fat and proteids. Rarely the milk is too rich; in the latter case care must be taken to give only small feedings at rather more frequent intervals, and after nursing the child should receive a diluent.

Infants under three months require about 3 percent fat, 6 percent sugar, and 1 percent proteid; at six months, the proportions are: 4 percent, 7 percent, and 2 percent. The constipated child of six months or over may receive the juice of half an orange each morning and oatmeal water as a beverage.

Value of Massage and of Posture

Massage of the abdomen proves extremely beneficial in many instances: the hand, moistened with warm olive oil, is moved with a circular motion from right to left, the pressure being gradually increased on the downward sweep. Such massage may be given night and morning, and immediately afterward the child should be encouraged to go to stool. Posture aids here: Children a few months old readily learn to empty the bowel when "held out." If at first there is no response, the little finger moistened with glycerin is inserted within the sphincter, or a glycerin cone may be introduced. If the stool is hard and lumpy, a few syringefuls of warm, weak, castile soapsuds should be injected.

Once the stools assume normal characteristics and are voided twice daily, it is a simple matter to maintain regularity.

If regulation of food, massage of abdomen imbibation of oatmeal water (or orange juice in older children), and simple momentary stimulation of the sphincters fail to secure satisfactory stools, it may be that we are dealing with some definite pathologic condition requiring precise treatment.

Simple Medicinal Aids

First be quite sure that the intestine is actually completely emptied. Calomel, 1-10 grain, half hourly for two to six doses. according to age of child, followed in a few hours by 1 or 2 ounces of a sweetened solution of magnesium sulphate or sodium phosphate, will sweep the bowel clean.

In atonic conditions, juglandoid, 1-6 grain, or berberine, 1-64 grain, three times daily before feeding, will prove useful.

Bryonin, 1-64 grain at similar intervals, often acts when other remedies fail. It is particularly indicated when the stools smell sour and there are signs of hepatic torpor.

Rheoid, 1-6 grain, given with a little freshly calcined magnesia at night and a laxative saline draught next morning, often produces free evacuation, initiating desirable conditions that may be maintained readily by the exercise of proper measures.

A formula that has served me well is the "sulphur laxative," each granule of which contains: sublimed sulphur, 1-32 grain; strychnine arsenate, 1-128 grain; hydrastoid, 1-64 grain; podophyllin, 1-64 grain; collinsonoid, 1-128 grain. One such granule may be given two, three or even four times daily for a few days where innervation and organic activity generally are below par. During its use the hygienic measures recommended must, of course, be followed. Infants with pendulous or pronouncedly protuberant abdominal walls should wear a snugly fitting flannel band.

Not infrequently dilating of the sphincter ani, gradually and carefully, is called for. In every case of protracted constipation, therefore, be sure to examine the little patient—and the stools—carefully. Where the rectal ampulla is dry and congested, order the injection, twice daily, of a few drams of olive oil. Glycerin is objectionable, because of its osmotic action. A mixture of equal parts of pure vaseline and lanolin works well in my own practice.

Indigestion may, of course, cause constipation and, when it does, must be corrected. Drugs are rarely called for here before the sixth month. The essential is to give just enough of a properly balanced food at regular intervals. "Whole milk" diluted with thin barley (or oatmeal) water, with some milk-sugar and (if required) cream added, makes the ideal nutrient for bottle-fed infants. Occasionally peptonized milk may be necessary for a time.

It is hardly necessary to suggest that constipated breast-fed children may be medicated through the mother, who, besides the all-important proper food for direct effect, should receive a moderate dose of cascarin at night and a saline draught on arising each morning.

Summary of Methods Which Cure

Rarely, indeed, will constipation in an infant fail to yield to a proper combination of the following procedures:

1. Proper adjustment of food-constituents, i. e., fat and proteid.
2. Regulation of maternal diet (if breast-fed) and exhibition to the mother of cascarin, phenolphthalein, laxative salines or castor oil.
3. Imbibation of sufficient pure cool water, oatmeal water or (later) fruit juice.
4. Massage of abdominal area at regular intervals with (if necessary) subsequent stimulation of the rectum by the insertion of glycerin-moistened finger or a suppository.
5. The exhibition of small doses of calomel (primarily), rheoid, podophyllin, juglandoid, hydrastoid, the "sulphur laxative" or "anticonstipation granules," and saline laxative.
6. Wearing of a flannel band if the abdominal muscles are lax.

If a baby grows naturally and passes normal stools, its food, whether of maternal or animal origin, agrees with it. If the child fails, is constipated or has diarrhea, it is absolutely essential to examine the food

closely and to supply any deficiencies. Sometimes gastrointestinal disturbances appear in breast-fed children when the mother menstruates. It is then necessary in most cases to feed artificially for the time.

The fact must be remembered that a child of seven months requires more than the average mother can supply. If we are to avoid trouble after the twelfth month, a mixed diet, must be insisted upon. Milk is still the staple, but an *exclusive* milk diet will cause constipation or diarrhea, or both. Modified milk, thin gruel, egg-yolk and cream, thin broth, zwieback, custard, and cracker or oatmeal biscuit with fig and prune syrup are the essentials.

A full dietary for the second year will be found in my "Everyday Diseases of Children*," together with feeding and percentage tables. Spach's "Handbook of Infant Feeding," already mentioned, also is thoroughly practical.

Constipation in Older Children

It is obvious that every degree of constipation will be encountered and require treatment in children between two and twelve years of age. Here, again, a properly regulated regimen means a great deal, but almost as important is exercise, both ordinary and specialized. The child, itself, must be carefully examined and rectal or other abnormalities corrected. Frequently one thorough clean-out, followed by proper feeding, the ingestion of a sufficiency of fluid, active outdoor exercise, and regular visits to the toilet will prove all-sufficient.

Nervous, run-down children will require some bitter tonic; juglandoid and rheoid, brucine, myricoid, quassoid, hydrastoid, or quinine hydroferrocyanide may be taken before meals, and the sulphur laxative or anticonstipation granules, for a time, after food. As normal tone is secured, the laxatives should be dropped.

If the condition is at first obstinate, evacuation of the bowel may be secured by the use of small doses of phenolphthalein, with sulphur and compound licorice powder, at bedtime, or, if the absence of bile is apparent, fractional doses of calomel and podophyllin with, perhaps, bilein. The morning laxative saline should invariably follow.

However, as the real object of medication is to remove the cause of, or conditions caused by, constipation, the range of remedies is, of necessity, a wide one. Enemata, suppositories, and rectal dilation may be required; but, in nine cases out of ten, we must rely for curative results upon diet, hygiene, exercise, and massage.

Commonsense Medication Plus Sensible Diet

It is useless to drug a child with purgatives when the only defect is a lessened irritability of the rectum. If we improve systemic tone and, at a stated hour each day, stimulate the rectal mucosa with the finger, glycerin or soap-pencil, we shall within a very short time "cure" that constipation.

When a marked atony of the intestinal muscle with deficient peristalsis exists, a course of berberine, physostigmine, and juglandoid will be required. We must order at the same time brown bread, whole-wheat mush, and fruits and vegetables, thereby affording a good deal of waste. However, this treatment will only make matters worse if the constipation is due to prolonged inattention to the calls of nature; for here the intestine is never really emptied, fecal masses being often discovered lodged as far up as the hepatic flexure.

In cases of this kind, it is necessary to clean out the colon with high enemata. First throw into the rectum 2 to 4 ounces of olive oil, then, the patient being in the knee-chest position, 2 to 3 pints of a normal saline solution. Inject slowly, making pressure upon the anus if there is a desire to eject the fluid. The oil is "floated up" in the colon, surrounding and softening the fecal masses and permitting their expulsion. After such an enema give the patient calomel, 1-6 grain; podophyllin, 1-6 grain, and bilein, 1-12 grain, every half hour for two to three hours. Six to eight hours later order a laxative saline or an ounce of castor oil. Repeat this procedure in three days, if necessary.

To insure normal bowel action in the future, instruct the child's parents to massage the abdomen every night. Also,

*Published by The Abbott Press. Price $1.00.

order a laxative diet, plenty of pure water between meals, and prescribe cascarin or phenolphthalein at bedtime. Intestinal tone may be secured by the use of berberine (or brucine), juglandoid and podophyllin, 1-64 grain, before food.

Rachitic, marasmic, strumous or anemic children will require reconstructives, bitter tonics, and laxatives. We must carefully avoid purgation, but endeavor to reestablish normal conditions. Nuclein, the phosphates, fibrinated bovine blood, the arsenates of quinine, strychnine and iron, and iodized calcium are the most desirable tonics; cascarin, phenolphthalein with sulphur, irisoid and the laxative salines are the preferable laxatives.

The Author's "Fruit Laxative"

For many years I have given with satisfaction a "fruit laxative" which can readily be prepared by any mother.

One pound each of good Smyrna figs, prunes, and sugar, and 4 ounces of senna leaves are stewed slowly in 2 pints of water for an hour. The container should be kept covered and the contents stirred well several times. At the end of an hour the fruit is strained—the solid portion being pressed thoroughly to extract all the syrup possible—and enough water is added to bring the amount up to 2 pints. Bring once more to the boiling point, add a tablespoonful of brandy, to prevent fermentation, and then bottle.

Of this syrup give 1 to 2 drams at bedtime. Cascarin, thalosen, or other laxatives may be added when necessary. Any medicinal tablet or pill can be advantageously exhibited in a few drops of this vehicle, as children all "cry for it," while the slight medicinal effect of three or four small doses a day is highly desirable.

Exercises for Children

Space limitations permit only the barest description of special exercises. The so-called "cradle-rock" is accomplished by the child standing firmly with both feet wide apart and the hands on the hips. The body is swayed slowly from side to side, movement being from the pelvis only. As one side descends, that knee is bent and endeavor is made to touch the floor with the finger-tips. The other limb must be held rigid. About six "rocks" are sufficient at first.

The "grand bend" is done while standing perfectly erect, with the arms extended (sides of hands touching) above the head. The body is then inclined forward from the waist and an attempt made to touch the floor in front of the toes. The motions must be repeated four to eight times and followed by a period of rest.

Deep breathing, working of the abdominal muscles, the use of the "bells," light clubs and the various exercisers are all useful. The "cradle-rock," "grand bend," and twisting the body from side to side, the pelvis and legs remaining rigid, are, however, the best exercises for relief of constipation.

Fads and Fashions in the Treatment of Genitourinary Diseases

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WHAT I am about to say is quite as pertinent to the general field of medicine and surgery as it is to diseases of the genitourinary system. Surveying the therapeutic innovations of the past thirty years, I can recall offhand many illustrations of the points which I shall endeavor to make. This, however, would be out of place here.

I am inspired to write this brief article by a statement recently made by a prominent urologist of the younger set, that the irrigation-treatment of gonorrhea has been discarded as worthless. I am especially

interested in this statement, because I believe I was the first to use the irrigation-treatment systematically. The first nozzle ever devised for irrigation of the urethra and bladder without tube or catheter was my own, and I am still using the original model.

It will be recalled that Reverdin and, following him, Janet highly extolled the virtues of the irrigation-treatment. The late Dr. Valentine, of New York, became famous through his routine use of the socalled Janet method. Many able men throughout the country employed and favorably endorsed the irrigation-method for the treatment of gonorrhea. It is a method of treatment that had a prominent place for a number of years. We are now told that it is worthless.

I will simply ask whether we are to believe that those who allege that the method has properly been thrown into the discard, have keener powers of observation than the many who went before and who extolled the method. It is pertinent also to inquire—and I grant honesty to the opponents of the method—whether they do not believe that they are as likely to deceive themselves in the observations upon which they base their adverse opinion as are those of us who have employed the method and who have found it useful. There is a question in my mind as to whether it is quite fair to those who have for many years extolled some particular method of the treatment of disease, for new faddists to assume that their forebears were ignorant or perhaps dishonest men. It is conceivable that men with large practices do not long continue to employ a method which they find to be useless or even injurious.

One of the great disadvantages of all systems of treatment is that inefficacy or evil results are charged up to the method, rather than to the individuals employing it. The irrigation-treatment of gonorrhea, as do all other methods of value, demands judgment, experience, and skill in its application, and the method should not be condemned as useless or injurious, without due knowledge of the circumstances under which it is administered and of the relative capacity of the individuals putting it into practice.

In brief, failures and evil results should carefully be analyzed before charging them up to the method *per se*. The severity of the condition, the existence of complications, and the mechanical conditions of the administration of the irrigation-method are all important factors.

Personally, I regret that the irrigation-method has gone out of fashion, and I am free to say that, when I hear it condemned *in toto* and some newer method of the fad-variety extolled, I feel confident that the individual who is condemning the one and extolling the other has had very little experience with the proper use of the irrigation-method. I admit that I myself am not practising the irrigation-method as extensively as formerly. Experience has taught me that it is no more to be adopted as a routine system of treatment than is any other method.

Physicians Too Precipitate in Reporting Results

Some years ago a recent arrival in the field of urology published a report on something like one hundred cases of acute gonorrhea cured in from a few days to several weeks by protargol. One year later he had abandoned protargol and was extolling, if I remember correctly, argyrol. As he thus admitted the unreliability of his first observations, one is justified in entertaining serious doubts as to the reliability of his subsequent report, the more so in view of the fact that, were protargol or any other routine method of treatment as valuable as the gentleman claimed it to be in his report upon the drug in question, it would be a case of "seek no further." Any man who has a drug that will accomplish in a large majority of cases the results which that writer claimed for either of the silver salts under consideration would be able, providing he had a monopoly of the treatment, to build for himself a gold house in a very short time.

In passing I may remark that, whereas, argyrol was extolled by everybody as a substitute for nitrate of silver and for all the other silver salts, and especially for the irrigation-method, it is one of the least active of the silver preparations. It is

worth while seriously to consider the reliability of a drug in a 20-percent solution of which gonococci will thrive and wax fat. Incidentally, there is a principle involved here upon which I have persistently harped for many years, to wit: the evolutionary aspect of infection. A drug that is very efficacious at the outset of a gonorrhea may be well tolerated by the gonococci later on. Microorganisms, like tissues, acquire tolerance of antiseptics.

I will state it as my belief that a knowledge of the principle named will prevent the urologist from acquiring confidence in the routine application of any drug. There comes a time when increasing strength does not offset the tolerance of the drug acquired by the infective organism. A much weaker solution of an entirely different drug or different salt of the same chemical may, however, be very efficacious, at least temporarily.

Why the Irrigation-Treatment Lost in Popularity

One of the principal objections to the irrigation-treatment—and this is one explanation of the fact that it did not hold its own—was, that the strictly surgical treatment of urethral disease went out of fashion when the irrigation-treatment came in. It was believed that dilations and irrigations were the *ultima Thule* of the therapeutics of urethral disease. With the advent of the new method, internal urethrotomy went almost entirely out of fashion. I unhesitatingly state it as my belief that there are thousands of cases of uncured gonorrhea at the present moment where the victims might be cured, or at least, under the ordinary methods of management of infection, set on the road to recovery by a properly performed internal urethrotomy.

Internal urethrotomy has been condemned or set aside by men who have had no experience with it, and by others who had no knowledge of the proper technic of its performance. It is a difficult matter at the present time to obtain the consent of a patient for the performance of an internal urethrotomy, unless such a one has gone the rounds and the inefficacy of all other methods has indubitably been demonstrated by their prolonged trial.

This is not a plea for indiscriminate internal urethrotomy; the reputation and good service of the operation were seriously impaired through its routine application, after the introduction of Otis' systematic method. I am merely suggesting that it is time to call a halt on the tendency of the profession to set aside all other methods of treatment, as unwise or injurious or at least inefficacious, as soon as a new method is introduced.

Some time ago my attention was called, by some of my professional friends, to a new silver salt, which was claimed to be an ideal preparation for the treatment of acute and chronic gonorrhea. Cases were cited to me by the dozen in which this remedy had accomplished wonderful results. Eventually I secured a large quantity of this remedy for use in my private and clinical practice, and gave it a thorough test for at least six months, checking my observations by those of two of my associates. On being asked, by the house which manufactured the preparation, for my candid opinion, I stated that it was very moderately useful in chronic cases, but absolutely worthless in acute ones. Thereupon I was informed that the gentlemen who so enthusiastically had endorsed it were losing faith in it.

Fortunately no reports were publicly made, and the manufacturer complimented me by accepting my opinion of the drug. If the early reports had been published, I presume that this drug would have been extolled as superior to all other silver salts in the treatment of acute and chronic gonorrhea, and would have held its own until some new fad had sprung up.

Indiscriminate "Touting" Should Be Frowned Down

Sometimes I think that the profession is sadly negligent of its duty in not "checking up" the glowing reports of methods of treatment advocated as wonderfully successful by gentlemen who a short time later abandon the method for something they consider better. It perhaps would not be unfair for the profession to investigate

as to the honesty and keenness of observation involved in the reports of the previous method, incidentally inquiring whether one who had extolled a certain remedy as a panacea, and had subsequently abandoned it, should be taken any more seriously in his reports of his new fad than he should have been taken in connection with his previous fads.

It is not long since the cacodylate of sodium was "touted" as a specific for syphilis. Will any syphilologist worthy of the name endorse the drug? It is remarkable that syphilologists have not risen up in their righteous wrath and condemned the touting of a remedy which not only is not a specific for syphilis, but is rarely, if ever, efficacious in cases in which the cure can not be explained upon other grounds than the administration of sodium cacodylate. I venture to say that the commercial faddism which has permeated the exploitation of salvarsan is bound to limit to a great extent the usefulness of that drug. I question whether the tommyrot that has been perpetrated regarding this really valuable drug will not be responsible in time to come for many, many cases of uncured syphilis.

The experience of tyros, quacks, and individuals who have little knowledge of syphilis or its treatment is, unfortunately, taken as the sum total of experience of the medical profession at large.

In Defense of the Balsams

It has become the fashion, on the part of "up-to-date" urologists, to assert the worthlessness of the balsams in the treatment of genitourinary inflammation and irritation. A recent writer very generously conceded that copaiba and cubebs were absolutely worthless. Now, with thirty-three years of experience and observation behind me, I unhesitatingly reaffirm what I have said on many, many occasions, to wit: the balsams are, upon the average, the most reliable of all the remedies we have for allaying irritation of the mucosa of the urinary tract. Indeed I sometimes question seriously whether they are not the only remedies which can be relied upon to give even a fair average of beneficial results.

I of course recognize the objections and contraindications to the use of the balsams; also I am perfectly familiar with their effects upon the stomach and the kidney. But what remedy that is powerful for good is not sometimes impaired in its usefulness by a drawback of one kind or another? Given a sufficient number of cases to warrant formulating conclusions and the employment of reliable preparations of the balsams, and I have no more doubt of their efficacy than I have of almost any other drug that could be mentioned—and I by no means am a therapeutic nihilist.

To those who assert the worthlessness of the balsams I would say: Be sure that you have a reliable standard preparation, and that you have given the remedy a fair trial in well-controlled cases in sufficient number before you pass an opinion as to the efficacy of these drugs.

An apparently useful method should not be condemned and a new fad substituted without carefully weighing all the facts bearing upon the old method. Many a valuable remedy has been thrown aside because used in a routine way and without careful discrimination of conditions and technic of its application. Any benefits on the one hand, or injury due to its employment, upon the other, must, necessarily, have been of the "hit or miss" variety.

Surveying the field of therapeutics during my thirty-three years of practice, I have noted that the search for panaceas has been quite as enthusiastic among modern physicians as it was among our forebears.

I do not believe that the discovery of the germ-origin of disease has helped us to avoid routine as much as one might suppose. The frantic endeavor to discover a specific germ for a specific disease, and the still more frantic effort to discover a remedy that will kill that germ, has been responsible for a great deal of the illogicality in modern therapeutics.

The germ is not all, and the knowledge that a certain disease is due to a specific microorganism should in its application to the therapeutics of the disease be tempered by an appreciation of the fact that there are two factors in all infectious diseases,

namely, first, the parasite; secondly, the host.

In conclusion, I will state it as my belief that commercialism, routinism, and ignorance are responsible for the present epidemic of fashions and faddism in therapeutics.

32 N. State St.

Acute Anterior Poliomyelitis

Its Diagnosis and Treatment

By W. C. WOLVERTON, M. D., Fort Dodge, Iowa

EDITORIAL NOTE.—Only yesterday we were informed by a correspondent of the existence of an epidemic of this disease in a little Nebraska town, requiring closing of the public schools and the churches. The disease is so widely spread in Buffalo, New York, that an officer of the United States Public Health Service has been detailed to study it. The report of another epidemic comes from Illinois. It is plainly prevailing widely all over the country, and every physician should be ready for it. To this end Dr. Wolverton's article will give valuable assistance.

THIS disease, commonly known as infantile paralysis, is a very acute inflammatory condition affecting the anterior horns of the gray matter of the spinal cord, associated with sudden paralysis of muscles, or groups of muscles, of one or more limbs, followed by atrophy of muscles, but with no sensory disturbances. It occurs at all ages, but the average age at the time of the attack is about two years. Mild attacks are frequently seen in adults, followed by little or no permanent paralysis, the true nature of the trouble not being recognized unless there is an epidemic among children of the neighborhood at the same time.

There is every reason for believing that the disease is infectious, and it is thought to be contagious, as it is so prone to occur in epidemic form; but the causative microorganism has not as yet been demonstrated, either because it is too small to be seen with our microscopes, or because its special habitat in the bodies of infected persons thus far has not been found. A diplococcus closely resembling the meningococcus has been observed, but has not been proven to be the causative agent.

Symptoms and Diagnosis

The onset of the disease is sudden, with a moderate or high fever lasting from a few hours to as long as four days, sometimes accompanied by vomiting, diarrhea, delirium, and convulsions. Sometimes the pyrexia is of so slight and transitory a nature as not to be noticed by the mother or nurse. Occasionally a child retires at night, apparently well, and in the morning it is found to have sustained a paralysis of certain groups of muscles (most commonly the anterior tibial group, and notably the peronei).

In a series of nearly thirty cases observed by the writer, in Emmons County, North Dakota, during the summer of 1910, one of the most constant and striking symptoms was the occurrence of pain and tenderness along the course and distribution of the sciatic nerve. Indeed, the first parents to call me had a ready-made diagnosis of "sciatic rheumatism." The legs and thighs are commonly flexed, being drawn up to the body; Kernig's sign is often present.

In the cases I have seen, there has usually been more or less retraction of the neck. Muscular twitchings are usually present; and sometimes clonic convulsions, at the onset. There is great tenderness along the course of the spine. Nystagmus may be present when the disease takes more of the cerebral than the spinal type. Within twenty-four hours in acute cases, or in a week in the subacute, paralysis appears; most commonly a paraplegia, or in one leg, or a diplegia, or simultaneous monoplegias.

After the acute symptoms subside, there may be, and usually is, pain in the back and legs for a few days. Rarely there may be retention of urine. In infants, the respiratory, laryngeal, and ocular muscles are not involved, but may be in older children. This was well illustrated in a boy of five years, who had a paralysis of the pharyngeal and laryngeal muscles lasting several weeks; he had many convulsions, with protracted high fever.

The paralysis increases for from one to four days, remains stationary for from one to six weeks, and improves for from six to twelve months. The paralysis gradually disappears from the limbs least affected, but leaves one or both legs (generally one) permanently paralyzed. It is a notable fact that, where an arm and a leg are affected, the arm always recovers before the leg.

Within two or three weeks, there may be some atrophy of the affected muscles. The paralyzed limb is cold and has a bluish, mottled appearance; the muscles are flaccid and become atrophied; reaction to degeneration is present; reflexes are absent. In the leg, the anterior tibial group of muscles is oftenest affected, and foot-drop results. The affected limb does not grow as rapidly as its normal mate, but remains smaller and shorter. Contractures supervene, giving rise to the well-known type of paralytic club-foot. Lateral curvature of the spine, a deformed knee, and a flail-like condition of the leg and foot may ensue. In adults, the facial nerve may be attacked, causing a Bell's palsy.

Differential Diagnosis

Acute epidemic cerebrospinal meningitis may be differentiated by finding the diplococcus intracellularis meningitidis of Weichselbaum within the polymorphonuclear leukocytes in the sediment of the cerebrospinal fluid obtained by lumbar puncture. This meningitis usually has a more violent onset than that of infantile paralysis, the former beginning much more abruptly with chill, high fever, vomiting, and severe pain in the back and limbs; in children, a convulsion may usher in the disease.

Very soon the muscles of the neck and back become painful and stiff, with marked retraction of the neck, or even opisthotonos. There is photophobia and delirium, followed in bad cases by stupor and coma. Basal symptoms are frequent, such as strabismus, nystagmus, ptosis, irregularity and inequality of the pupils, and facial spasm. The respiration often is sighing or may partake of the Cheyne-Stokes type. In many cases, blotchy purple spots and petechiæ are found over a greater or less part of the surface of the body (whence the name "spotted fever").

Sciatica might be mistaken for infantile paralysis, or more likely *vice versa*; but sciatica is not commonly seen in children. When it does occur, the onset is gradual. The point of greatest tenderness is over its point of exit at the great sacrosciatic foramen. Sciatica is not accompanied by high fever, vomiting, convulsions or spinal tenderness.

In one case of infantile paralysis seen by the writer, another physician had made a diagnosis of "bronchopneumonia"; this he would not have done had he stripped the child when making the examination, as the paraplegia was very evident after the clothing had been removed.

Treatment of the First Stage

While we have no *specific* treatment for infantile paralysis, I believe, from personal observation as well as from the experience of others, that a great deal can be done toward lowering the mortality, ameliorating symptoms during the acute attack, and to a considerable extent lightening the dreadful sequel, paralysis.

In my limited experience, it has been my constant observation that, where an early diagnosis was made, and then an active, logical line of treatment promptly instituted and persistently carried out, the mortality was practically *nil*, and the paralysis very light indeed. It seems to me that too much "therapeutic nihilism," or at least "therapeutic pessimism," has prevailed in regard to the treatment of this disease, as likewise in pneumonia and other acute infections.

When a case is seen early in the acute stage of the disease, every effort should be made to restore circulatory equilibrium

and cause as early a return of the temperature to normal as possible. This can best be accomplished, in the way of drugs, by the use of aconitine and of veratrine, administered in small doses, frequently repeated to effect. The way to do this, is to follow *Shaller's Rule:*

In 24 teaspoonfuls of hot water, dissolve 1 standard dosimetric granule of the desired alkaloid for each year of the child's age, and then 1 more granule extra. Of this solution, a teaspoonful is given every fifteen minutes until pulse and temperature begin to be affected; then every twenty to thirty minutes until these symptoms are under control; after that, as may be indicated. However, I often double the above dosage when speedy action of the remedy or remedies is imperative.

But even these keen-edged therapeutic tools will not do their work unless the alimentary canal has first been thoroughly cleansed. This can certainly and speedily be accomplished by the administration of from 1-10 to 1-4 grain each of calomel and sodium bicarbonate (saccharated, and flavored with wintergreen or rose) every half hour, or every hour, until a free evacuation occurs. While waiting for the calomel to act, give an enema of physiologic saline solution, consisting of a heaping teaspoonful of *clean* table-salt to each pint of tepid water.

Cool sponging with alcohol and water, or with water alone, is essential to the reduction of temperature and elimination of toxins. Make use of it persistently until the fever is controlled; then as indicated.

After the bowels have been thoroughly emptied, give physiologic saline solution frequently, at least every three or four hours, slowly, per rectum. If possible, give it almost continuously, by the drop method, by partially clamping the tube of the fountain-syringe with a hemostat or a spring clothes-pin. It stimulates all the excretory organs, thus eliminating toxic substances which would otherwise be retained in the circulation and contribute materially in prolonging the elevated temperature.

Hexamethylentetramine (commonly known as urotropin or formin) has established for itself quite a place in the treatment of various acute infections, especially those affecting the cerebrospinal system, as the drug is largely excreted into the spinal canal. It seems to be possessed of considerable antiseptic power against pathogenic cocci, probably because of its formaldehyde-content, and has been used with apparently considerable benefit in acute epidemic cerebrospinal meningitis, a disease closely related to infantile paralysis.

However, hexamethylentetramine must be given cautiously, *dissolved in a large quantity of water*; otherwise, *hematuria* is apt to occur. I saw one case in which another physician had been giving 4 grains of this drug every four hours, to a child of 3 or 4 years. After two or three days, a profuse hemorrhage from the urinary tract occurred, and I believe this was due to the fact that the doctor had neglected to direct the powders to be dissolved in a large quantity of water.

Calcium sulphide is a logical remedy, given to saturation, if we accept the idea that we are here dealing with an infectious process. I have seen it save one life in a case of meningitis.

Spiritus ætheris nitrosi is a valuable remedy, to stimulate elimination through skin and kidneys, besides its effect on the temperature and circulation. But one must give it in *good dosage*; very seldom is this valuable remedy given in dose enough really to accomplish anything.

If there is hyperesthesia, muscular twitching or other tendency toward convulsions, give chloral hydrate and bromides. If not tolerated by mouth, administer per rectum.

Gelseminine also is of value in the early, irritable stage. Give in small dosage, frequently repeated to physiologic effect. It is a powerful spinal depressant.

Ice-bags should be applied to the occiput and along the spine.

Treatment of the Second Stage

With the establishment of the initial paralysis, electricity and massage are indicated. The use of these should be begun about two weeks after the onset of the disease. I have used the high-frequency current, in the form of mild applications of

only five to ten minutes, over the paralyzed limb, as early as the seventh to tenth day, with very beneficial results. Pfister, in Pfaundler and Schlossmann's "Pediatrics," states that "it is probable improvement in muscles that are completely paralyzed is hastened by electrical treatment."

The object of electrical treatment is to keep up the nutrition of the muscles until the spinal cord has recovered, which it is almost certain to do to a certain degree. But no amount of electrization can preserve muscles whose ganglion-cells have been completely destroyed. Faradism may be used for such muscles as respond to it; otherwise, galvanism should be employed.

Where galvanism is used, there should be some device for "making" and "breaking" the circuit, in order to stimulate muscular contraction. In any case, great care must be used not to overdo the good thing by using too strong a current or for too long at one seance. The beneficial results from electricity are to be obtained during the first year after the onset of the acute stage, and chiefly during the first six months.

Strychinne may be given after all symptoms of central irritation have disappeared; but it should be used with great care, and not in the haphazard manner of the lazy doctor who gives this powerful remedial agent whenever he knows of nothing else to do. Certainly it is absolutely contra-indicated in the early, irritable stage of the disease.

Friction and massage, over the affected muscles, at least twice daily, over a long period of time, undoubtedly are beneficial. A mechanical vibrator is a useful adjunct in the administration of massage.

In this stage of the disease, the medical attendant must be on the lookout for the development of deformities, and provide and fit suitable appliances for their correction, in order to avert permanent bony deformities.

Treatment of the Third Stage

When, at the end of a year, there no longer is any improvement in response to electricity, massage, warm baths, exercises, strychnine, and so on, then treatment becomes surgical. A great deal is being done, with excellent end-results, in the way of transplantation of the tendons of living muscles into those of paralyzed muscles.

In conclusion, I wish to make the plea that we should ever be on the watch for such diseases as the one I have just discussed, the symptoms of which are often so vague at the onset and the effects of which are so disastrous if strenuous measures are not instituted early, before permanent damage has been done. I believe most thoroughly that much can be done, when these cases are seen and recognized early, by at once instituting a vigorous line of treatment. Do not wait for the complete development of the disease before beginning treatment; *treat what you can see*, at least, until the picture becomes clear.

Hypodermic Aids to Anesthesia

With Special Reference to the Use of Hyoscine, Morphine and Cactin

By F. E. WALKER, M. D., Hot Springs, South Dakota
Surgeon to Our Lady of Lourdes Hospital, and to the Braun Sanitarium

FIVE years ago I presented an article before the Missouri Valley Medical Society on the subject of anesthesia by the combined method of chloroform, and hyoscine and morphine, reporting seventy-five cases wherein this method had been employed. Since that time more than three thousand patients have been anesthetized in my clinic at the Sisters Hospital, and additional information has accumulated that has a bearing of more or less general benefit.

In the earlier period of the use of hyoscine, morphine and cactin we were admonished concerning its administration, in the very young as well as the very old, that

from five to fifteen minutes was the correct time for its administration prior to operation. We were also cautioned to watch it closely, and told that a large number of patients would be unable to bear this drug combination. Endeavoring to make a thorough investigation concerning these points and to find out who could and who could not safely take it, as well as the reason for this, I exercised every caution and had the anesthetist keep elaborate notes, in the hope of coming to a definite scientific explanation, and to follow this with a safeguard.

Best Time For Giving the Obtundent

The result of this study on our first thousand cases proved that our observation did not show any ill effect except in two patients, and in only one of these was any alarm expressed. The tablet in each instance was given as directed, about fifteen minutes before the operation. Our next patient after that was given the injection one hour before operation, and this period was observed in a goodly number of patients with absolutely good results in every instance. At about this time we allowed fifteen minutes more, making the time of injecting seventy-five minutes prior to having the patient brought to the table. From that time until now, we have followed this period of administration faithfully and have never observed a tendency toward anything bordering on danger.

It seemed that the problem was solved, in view of the fact that about fifteen minutes after giving the injection is generally the time when the danger-point is reached; for, while the patient may be alseep, he is not in the right mental state, and sensation is obtunded; there is at this moment as much danger of stirring up an antagonistic influence when getting him on the table as there is in waking up a drunken man at the wrong time. Added to this period of heightened danger, there are the drugs, themselves, and these two combined influences operating upon a hypersaturated system constitute, to my mind, the dangerous stage.

The first year in which this method was followed we gave chloroform almost exclusively, after that, however, turning to ether, and we have adhered to the latter ever since. The same splendid results followed the hyoscine-morphine-cactin that were obtained with chloroform. Our present method of administering the anesthetic has not changed, and because of the perfect satisfaction experienced both by patients and the surgeon we know of no reason for modifying it.

Another matter which formerly gave us considerable trouble was a certain class of heart lesions, by virtue of which a large proportion of patients with leakage or other defect were unable to undergo an operation requiring the use of a general anesthetic. And it was not so much because the anesthetic in itself was feared, but rather the high nervous tension, the excitation of every sense while taking the ether, and the universal horror of being "put to sleep." Such individuals invariably would have a bounding pulse of such rapidity that a sudden collapse would not be unexpected, and neither surgeon nor patient were inclined to take the risk. This same objection would still hold good if the hyoscine-morphine-cactin were given fifteen or twenty minutes before the operation, but no fear whatever of this nature need be entertained when proceeding as here outlined. We have paid no attention to the condition of the kidneys, except when the phenolsulphonephthalein test contraindicated operation.

The Proof of Safety

That we are able to anesthetize with safety nearly every patient requiring a surgical operation is due, above all else, to the hyoscine-morphine-cactin, and for the following reasons:

1. A perfectly placid and pacific mental state is insured.
2. The patient is always in a receptive mood.
3. No fear or horror of the anesthetic is entertained.
4. No fighting, struggling or excitement occurs.
5. No choking, no secretion of mucus, no coughing, no vomiting and no pain are present.

6. The full realization, on the part of the patient, of the small amount of ether required.

7. The realization, furthermore, that no pain after the operation will be felt, and that vomiting occurs in only two per-cent of all subjects.

8. Absolute confidence in every one connected with the hospital.

9. Greatly reduced time occupied in producing anesthesia.

10. Very little variation in the pulse-rate; this not exceeding ten beats in the majority of patients, even in prolonged operations.

11. Great reduction of time spent in the operating room.

12. An anesthetic sleep as near the normal slumber of the child as can be obtained.

13. A method safe, conservative, and eminently satisfactory.

The average patient—especially of the class who know nothing about hospitals, surgeons, and anesthetics—is prone to regard the ether or the chloroform inhaled as the real danger. It used to be hard to gain the confidence of patients under the old system, as the surgeon could not deliberately lie to them, for only too often the whole period of anesthesia was one long-drawn-out struggle.

Now we see the frightened patient become calm, hopeful, trustful, and willing to undergo the operation, because the old-time horror of the anesthetic is a thing of the past. Patients who have been operated upon under the old system, still in vogue in so many hospitals, have taken the anesthetic under the system here described, and have told me many a time that they would never fear undergoing another anesthesia. Our own patients, when coming again to submit to another operation, never entertain any fear whatever of the second anesthesia.

Our Routine of Preparation and Inducing Anesthesia

Our present complete method of preparation, etc., for operations and anesthesia is as follows:

1. The patient is in the hospital from twelve to twenty-four hours before the operation, except in certain extreme cases. There is no satisfaction in having patients on a period of dieting, bowel cleaning, and other preliminaries longer than indicated.

2. A tub bath at a temperature of from 96 to 100 degrees, from five to ten minutes in duration. This is immediately followed by a thorough soap bath all over, and the nurse is instructed to give the entire body-surface a brisk towel rub and then an alcohol massage. This is done late in the afternoon, and then the patient is put to bed and kept there. A very light lunch is served at half past five, with no particular attention as to character of the food.

3. Castor oil is given in sufficient dose to move the bowels. We do not insist on the oil, however; a saline laxative or any other non-irritant cathartic will do just as well. All that is needed is one good bowel movement. Whether the bowels have moved or not during the night or early morning, a soap and water enema is administered between 6 and 7 in the morning. The rectal tube is not inserted for more than 4 or 5 inches.

4. A small piece of toast and a cup of hot tea or coffee is now permitted. We do not believe that an empty stomach during an operation, which always is a tax on the system, is desirable, just as we should not refuse a little breakfast for our morning's work.

5. Seventy-five minutes before the hour set for operation, the nurse injects the amount of hyoscine, morphine and cactin specified by the surgeon (this point will be referred to later), the curtains are drawn, and after this no one is allowed to be in the room.

Inducing the Anesthesia

When the time comes for removal to the operating room, the patient usually is asleep, but can easily be awakened, and without any protest or any fear on his part he is brought to the table in an ideal state.

The volatile anesthetic is administered in the form of a very fine spray, without hurry or excitement. The mask is gradually brought closer to the face, without increasing the amount sprayed. The patient soon is fast asleep and the operation may be proceeded

with. We pay no attention to the eyes in inducing anesthesia, but those who do will find that the hyoscine, morphine and cactin compound has limited nothing. This is not true of any morphine combination when given only a few minutes before beginning to operate. Under the method described there is complete relaxation, unless an insufficient amount of the compound was administered.

Upon completion of the skin incision, the anesthetic is withdrawn, and then given again only as needed. The total amount of ether required in conjunction with this hyoscine-morphine-cactin anesthesia is exceedingly small. Instead of ounces, as under the old system, under the new plan it is a matter of a few drams only.

The After-Management

The operation completed and patient in bed, an ice-bag is placed over the lower part of his throat. In 90 percent of the cases, the postoperative sleep is two hours. If the operation has been unusually severe, a second injection of the hyoscine-morphine-cactin compound is given, but always in one-half the dose as before the operation.

In all cases of stomach operations, the contents are removed by means of the tube while the patient is on the table. In the event of vomiting setting on after operation—which occurs in about two percent—the stomach-tube is resorted to if the patient vomits oftener than four or five times. That we have used the tube for this purpose in only 26 cases out of a total of more than 3000 operations, is conclusive evidence that severe vomiting seldom occurs. Some patients will feel like wanting to vomit, others will vomit once or twice, but, with the escape of gas, nausea and vomiting disappears.

As to the Dosage of Hyoscine-Morphine-Cactin

6. The amount of hyoscine-morphine-cactin required necessarily will vary with the patient, in very much the same manner as the quantity of ether used differs, which in one patient will be small, in another, large.

As to age, and using morphine as the basis, the dose for the young patient of ten to twenty will be from 1-16 to 3-8 of a grain. From twenty to sixty the dose is from 1-4 to 3-4 grain. The weight of patients is always considered, and heavy patients receive two doses—usually one full-strength tablet and half of a tablet one-half hour later. The hysterical woman receives the full tablet in two doses, one administered two hours, the second one hour before the volatile anesthetic. The dark-complexioned patients should, as a rule, receive 1-8 grain of morphine more than the blondes.

Almost all rectal, prostate, and bladder operations will be more easily accomplished by a single injection of 3-8 grain. Hernia and other operations made under local anesthesia are preceded by the full tablet one hour before operation and a second injection of one-half the amount just before the subject is brought to the table. In all operations of the nose and throat 1-8 grain generally is administered. In all nerve diseases, such as neuralgia and sciatica, the amount injected is one or two full-strength tablets of hyoscine, morphine and cactin

Following all operations, the patients are propped up in bed and allowed to recover from the anesthetic in this position, except rarely for particular reasons.

Beginning six hours after being placed in bed, a hypodermic injection of 1-50 of a grain of physostigmine is given every four to six hours for from two to ten times. No cathartics are given if rectal enemas sufficiently move the bowels. The customary cathartics are prescribed when required, but no routine is followed in their choice; the hypodermic injections of physostigmine and the rectal enemas in the great majority of patients being sufficient.

The Choice of Foods, and Convalescence

The urine is examined daily after operation and, if acetone is found, the patient is given baked potatoes, toast, and buttermilk. If acetone is present and the patient is vomiting, a small piece of baked potato will relieve the nausea almost immediately.

Food is administered beginning from twelve to twenty-four hours after the operation, the time of giving, most often, being

as soon as the patient becomes hungry. An empty stomach and intestinal canal is no savior of any such patient. A filled stomach or gut in which there is muscular inactivity always is a bad thing, but food in the intestine, with a bowel movement every second or third day, never is bad, never dangerous, but, rather, of decided benefit, provided the feeding is intelligently directed.

No fixed rule for the time for patients to sit up in a chair is followed. We like our our patients to be out of bed as soon as possible. Some can be permitted to be in a chair a few minutes twice daily the second day, others may have to remain in bed for four or five days. There is no more reason, in ordinary operations, for keeping a patient in bed from seven to twelve days, than there is for a man or woman to work hard for a few hours and then go to bed for a similar time. Careful handling by two or three nurses cannot do any harm. The thing to be insistent upon is, that the patient shall bear no burden in getting out of bed.

As soon as convalescence is established sufficiently to allow the patient to get up and and around, he is conveyed to a convenient and pleasant room in a boarding home near the hospital. This is advised for several reasons—economy, more social environment, change in surroundings, and more homelike atmosphere; all of which make for a more rapid cure. A surgical hospital is no place for the average convalescent, and every such hospital should maintain a separate "home," wholly separated, wholly distinct, and supervised by people in the general business-walks of life.

Too much hospital and too much nursing, with the sight of too many sick people, and too much surgical conversation are harmful. Limit everything connected with the patients' hospital life. Make their stay as pleasant as possible and just as short as is consistent with safety.

Food Adulteration and Sophistication

With Special Reference to Butter

By CHARLES F. LYNCH, D. V. S., Chicago, Illinois

EDITORIAL NOTE.—We are much gratified to announce that Dr. Lynch will follow this fine introductory paper with other articles upon the exceedingly important topic of "Pure Food and its Substitutes." In the next number of CLINICAL MEDICINE *he will discuss the adulterations of coffee, tea and spices; in a succeeding issue, meat inspection. Dr. Lynch has been actively engaged in the Government inspection service, and is also an earnest student of human medicine. The papers which he presents are of intense interest.*

FOOD adulteration is a subject which has been growing in popular attention for the past fifty years. It was not, however, until the early 80's that official cognizance was taken of this rapidly growing fraudulent practice. In 1881 the study of this subject was taken up by the Bureau of Chemistry, and it has been one of the principal branches in the attention of that Bureau, under the direction of Dr. Wiley and his assistants. In 1883 the first food-inspection law of any importance was passed by the Massachusetts State Legislature.

From this early beginning the movement has gradually gained momentum until the early part of the present century, when a series of startling exposures of the conditions existing in the meat and food industries led to the passage by the United States Congress of the Meat Inspection Act, and the Pure Food and Drugs Act, both of which were passed in 1906. Efficient food inspection in this country may be said to date from the passage of those laws. Following the lead of the Federal Government, more than half of the states in the Union

and hundreds of our principal cities have adopted food-inspection ordinances and regulations for the purpose of controlling the manufacture and sale of foods and food-products.

Public Interest in Pure Food

With the passage of these laws and the discussions that preceded and followed their inauguration, the public interest has been aroused very widely, and the subject of pure foods is more extensively studied in our country today than ever before in its history. Pure-food societies have sprung up in every community, and the general public now is more conversant with the subject than at any period in our history, not alone in our cities, but in the rural communities also. With increased knowledge, there has come demand for more and better laws for public protection from the dangers to health and the financial fraud that are the accompaniments of the admixture with our daily food of deleterious, poisonous, and inert substances.

Prophylaxis in the field of medicine likewise has made wonderful advances in the past two decades. Proper attention to the condition, functions, and fuel supply of our alimentary tract is now accorded almost universal support as a means of prevention of the inroads of disease. The modern physician realizes that, if the health of his patient and especially his pediatric patient, is to be conserved, his food supply must come from proper sources, must be prepared and handled under sanitary conditions, and must be kept free from poisonous coloring materials and questionable chemical preservatives.

The layman has come to look to his physician for advice along this line, and, in the large majority of those cities and states where food-inspection laws are being enforced, the administration of them has been delegated to the medical profession, through the offices of a commissioner of health or chairman of a state board of health.

Our medical colleges have been somewhat slow in recognizing the importance of this branch of prophylactic medicine and but few of them give any systematic instruction in food inspection and adulteration. In this respect they have been outdistanced by many of the leading veterinary and agricultural colleges.

Many of the practices of the modern food adulterer are so skilful that it requires expensive chemical equipment and expert chemists to detect the fraud; still, many of the more common frauds can readily be uncovered, in a few minutes of your spare time, by means of a few of the common reagents found in every physician's office. The time and money so spent will prove most lucrative both in financial returns and in the personal satisfaction of being an aid in the protection of your patients and community from fraud.

Classification of Forms of Adulteration

The methods of food adulteration are legion, but they may all be classified under two general heads. In one class we may group those forms of adulteration in which chemical preservatives and various dyestuffs (practically all of which are recognized to be deleterious to health) are employed to increase the keeping qualities and improve the appearance of the finished product. The second broad class of adulteration is that wherein substitution, wholly or in part, of a cheap inferior article for a more valuable product is practised. A common example of this form of adulteration is the substitution of Rio or other cheap grade of coffee for the more costly Mocha and Java grades.

Added to these two classes of adulteration, misbranding is also a common practice of the unscrupulous manufacturer. Misbranding as to country of origin; deceiving designs on the label; failure to state the presence of such drugs as opium, morphine, cannabis, cocaine, and other narcotic drugs, as well as incorrect statement of weight, are among the commoner forms of misbranding.

Commercial chemistry has found a very lucrative field in the various branches of the food industry, and with its advent there has arisen the practice of adding to prepared foods various forms of chemical substances of an antiseptic character for

the purpose of preventing the natural processes of fermentation and decay and thus increasing the keeping qualities of the product. Prominent among the chemical allies thus secured by the trade are formaldehyde, boric acid, benzoic and salicylic acids, and the sodium salts of these acids—borax, sodium benzoate, and sodium salicylate—sulphurous acid, the sulphites, and ammonium fluoride. So profitable and widespread has become the use of these chemical preservatives that many proprietary compounds are now on the market, advertised as harmless substances, and which are sold to manufacturers for the purpose indicated. In practically every instance these compounds are composed of one or more of the substances mentioned.

Harmfulness of Added Chemical Preservatives

So profitable and widespread has become the commercial manufacture of chemical preservatives that the sale of these products is no longer confined to the food manufacturers, but, through agents and retail stores, various forms of "liquid smoke," milk preservatives and chemical compounds for the preparation of "cold process" preserves, are sold to the housewife, who uses them, wholly unsuspecting their real composition and nature.

Manufacturers frequently contend that these preservatives are harmless in the quantities present in the finished product. While, of course, it is true that only a small amount of the selected chemical preserving agent is required for each can to keep its contents efficiently, we must remember that the continued and frequently repeated ingestion of even this small amount of preservative, in not one kind but numerous kinds of food-articles—our tomatoes, our corn, our milk, our peas, our peaches, our hams, and all the other articles of our daily diet—a can of this and a can of that, a slice of this and a bit of that, necessarily leads cumulatively to the consumption of unsuspectedly large and eventually harmful amounts of these antiseptics.

This subject has grown greatly in importance within recent years, through the enormous development of the canning industry in this country. Thirty years ago the amount of canned goods in our market was almost negligible in quantity, whereas today the canning industry is one of the most important in the United States. Practically every form of fruit, vegetable and dairy product can be found in the cans on the grocer's shelf. Meats, soups, fish, and in fact practically every article of food that appears on the daily table, is now supplied by the modern cannery.

Investigations carried on by the Bureau of Chemistry and by the German imperial government have proven quite conclusively that the continual ingestion of the commonly used chemical preservatives does have an injurious effect, and a close inquiry into many of our obscure gastrointestinal and neurotic cases no doubt would bear further evidence of the effects of the continuous drugging—the result of the toleration of this form of food adulteration.

Artificial Coloring Falls in the Same Category

Scarcely less harmful is the use of the many dye-stuffs that are so freely added to make the finished foods more attractive to the eye. By means of these artificial colors, green and unattractive-looking fruits often are fraudulently made to resemble the more desirable rich, luscious, ripe fruits. By the aid of colors and synthetic compounds, it has become possible wholly to substitute many common articles of food, drink, and condiment, by artificial mixtures. Thus cider, flavoring extracts, vinegar, jellies, jams, honey, wines, and numerous other articles in common daily use can be wholly or partially artificially prepared by the modern commercial chemist and sold as, and for the price of, the genuine article.

Perhaps one of the most common frauds practised in the food industry is the sale of colored butterine or oleomargarin for the genuine dairy product. The amount of this colored artificial product that is offered for sale under such names as "fresh creamery," "Elgin creamery," "best creamery," and "Wisconsin creamery" butter is enormous.

The coaltar products, owing to their ready solubility, the stableness of the color they impart, and the relatively small quantity necessary to color the finished

product, especially lend themselves to the purposes of the fraudulent manufacturer.

In addition to coaltar products, many vegetable colors are useful for the purpose of tinting food. These vegetable colors are, in the main, regarded as harmless; but they are undesirable from the standpoint of the manufacturer, owing to the fact that they are more expensive, considering the larger amount that must be added, and the color imparted is more susceptible to the action of light, fading after prolonged exposure on shelves and in display windows.

Under the regulations drawn by the Bureau of Chemistry, the use of certain specified coaltar dyes is permitted when their presence is stated on the label. These permissible colors are regarded as harmless to health when carefully manufactured. In this connection it is extremely important to remember that the utmost care must be used in the manufacture of dyes intended for use in food-products, as some coaltar products, when carelessly made, frequently contain considerable proportions of arsenic.

Food Dyes and Fraud

Entirely apart from the question of wholesomeness, the employment of dyestuffs should be discouraged, inasmuch as it opens a vast field for fraud and substitution. The manufacturer who is unscrupulous can take apple juice and glucose and, by the addition of suitable coloring agents and synthetic flavors, can simulate practically all the more high-priced jellies and jams, including strawberry, raspberry, blackberry, currant, and so on. Green and unwholesome tomatoes can be turned into a ketchup, artificially colored, chemically preserved, and sweetened with saccharin, and then sold for the same price as a genuine article prepared from the fresh, ripe, sound fruit. The extremes to which this form of adulteration can be carried practically know no bounds, while many articles can be wholly substituted by cheap inferior substances artificially colored and flavored to resemble the geniune.

So widespread has become this form of fraud in many districts where regulation by the authorities is lax or hampered through political interference that honest manufacturers have practically been driven from the field, or else forced to meet their competitors on their own ground by adopting similar disreputable methods of manufacture. In the desire to show a financial profit and meet dividend requirements, the life and health of the consumer many times has been treated with absolute indifference.

Some Common Adulterations

Butter, owing to its almost universal use, has offered a most inviting opportunity to the fraudulent dealer. Some idea of the extent of the fraud practised in this one branch of the food industry may be gained from the fact that, out of 204 samples of butter examined at the Illinois Food Commission's laboratory in 1910, only 23 were found to be of legal standard, while 181 were not according to the law.

Colored oleomargarin and renovated, or process, butter are the two most common forms of substitution practised upon the butter consumer.

Oleomargarin, in itself, is a desirable and nutritious substance, being a mixture of oils obtained from beef fat and neutral lard churned with milk so as to form an emulsion, from which the fat globules are collected by a chilling process. Many manufacturers add cottonseed-oil and in some grades a small amount of butter, for the purpose of having the finished product more closely resemble in tint and flavor the normal butter.

Oleomargarin properly prepared is wholesome, clean, and in chemical composition is very similar to butter; but, owing to the absence of certain butyric-acid compounds proper to butter, it lacks the palatability and peculiar digestive qualities found in the latter. It is only when oleomargarin is colored and fraudulently sold as butter, and at the same price as butter, that it is to be regarded as an adulterant.

Oleomargarin can be prepared and sold in its natural form at a price much below the average prevailing price for butter. When so placed upon the market under its true name, it may well be regarded as a valuable economic addition to the poor

man's table. When artificially colored, a special tax of ten cents a pound must be paid by the manufacturer; but even with this added tax, its sale, at the price usually charged for butter, leaves a very wide margin of profit for the unscrupulous dealer.

Renovated Butter

Renovated butter is a much less commendable product than oleomargarin. This article is a worked-over butter, being made from what is known in the trade as "packing stock." This packing stock is the butter gathered up from the country dealers and much of it on reaching the renovating factory is a most unwholesome-appearing substance. A large proportion of it not only is disgustingly rancid but filthy, and could not possibly be sold to the retail trade.

For the purpose of restoring, this spoiled butter is melted and the liquid fat drawn off into large steam-jacketed vats, where, by blowing hot air through it, the free butyric acid is removed. The odorless fat is now washed with several changes of water until all the dirt is removed. Thus purified, the melted butter is churned with "ripened" sweet milk till it forms an emulsion, and this is sprayed into tanks of ice-cold water, where the butter fat solidifies. Finally, this granular mass is collected, salted, thoroughly kneaded, and packed, ready to go back into the trade as "fresh" butter.

Most states now have a law requiring that renovated butter be correctly labeled and sold under its own name; nevertheless, the illegal selling of this product as fresh butter is a widespread practice.

How to Detect Margarin and Renovated Butter

While the butter fraud is extensively practised, there is little excuse for allowing this deception to be carried on, as it is exceedingly easy to differentiate the three products by the following two simple operations:

The first of these—"the spoon test"—serves to distinguish true butter both from oleomargarin and renovated butter. By means of a second test—"the Waterhouse, or milk test"—oleomargarin can be differentiated from butter and the renovated product.

The spoon test is performed in the following manner:

A piece of butter the size of a small marble is placed in a large spoon and heated over a Bunsen or an alcohol flame, stirring constantly with a match, stick or toothpick. An open gas flame or the heat from the top of an ordinary lamp-chimney will do if neither a Bunsen nor alcohol flame is available. If the sample is pure butter, it will boil noiselessly, with the formation of a large number of bubbles and a profuse froth. If the product is either renovated butter or oleomargarin, the behavior is entirely different. The melted fat, in this case, will sputter and crackle like frying grease, and the profuse foaming occurring in the case of true butter will be absent.

Taking for granted that we obtain this crackling and sputtering, which shows that the product is not butter, but either oleomargarin or renovated butter, we can now proceed to differentiate between the two latter products by the following test, which is known as the Waterhouse, or milk, test.

The Waterhouse Test

Place about 2 or 3 ounces of sweet milk in a wide-mouthed bottle and set it in a pan of boiling water. When the milk becomes heated to nearly the boiling point, add a teaspoonful of the sample, and stir the mixture with a small wooden stick until the "butter" is melted and the fat thoroughly mixed with the milk. Lift the bottle from the vessel of boiling water and place it in a pan of ice water, continuing stirring until the fat is solidified. Now, if the product under examination is butter, either fresh or renovated, the fat will chill out in fine granules uniformly distributed throughout the milk. If the sample be oleomargarin, the fat will form in one more or less compact mass and may be lifted from the milk in one lump adhering to the stirring rod.

When two simple tests so readily performed are available, it is unnecessary for any physician to be uninformed as to the character of the butter supplied to his patients or his own family.

THERAPEUTIC NOTES

NUCLEIN IN ERYSIPELAS

Dr. E. B. Blumenau reports, in the *Wratsch Gazetta*, on his success in the treatment of severe cases of erysipelas with intramuscular injections of sodium nucleinate. Blumenau was led to employ the remedy on account of its ability to produce hyperleukocytosis, and injected doses of 1 to 3 Cc. of a 10-percent solution. Reviewed in *Wiener Mediz. Woch.*, May 25, 1912.

MORPHINE ACTION NOT ALIKE GIVEN INTERNALLY OR HYPODERMICALLY

Dr. Eisenschitz (*Wiener Med. Woch.*, 1912, No. 24) calls attention to the fact that frequently the narcotic effect of morphine fails after subcutaneous injection when even smaller doses, given internally, give good results.

In the same issue Dr. Arthur Wiess relates the history of a case of cancer of the stomach in which suppositories containing 1-12 grain of morphine always produced sleep, while the subcutaneous injection of two or three times this dose did not act.

BIOLOGIC TREATMENT OF GONORRHEA

As in the case of all infectious diseases, many attempts have been made to produce a vaccine or a serum for the biologic treatment of gonorrhea, and a number of such preparations are more or less commonly in use, with preference for the sera. The *Wiener Medizinische Wochenschrift* for May 25 quotes the Italian investigator Professor Rodolfo Stanziale to the effect that he succeeded in his experiments in producing immune bodies in rabbits by a certain method of immunization. Further, Stanziale concluded from the results of his investigations that it is possible to obtain an immune serum from rabbits that is capable of producing a specific passive immunity in young rabbits, being effective even against several times the fatal dose of the gonococcus virus.

If these results of Stanziale should be verified by other investigators, we may perhaps look forward in the near future to the production of a gonococcic serum which can be used as a means of prophylaxis, similarly as we now "vaccinate" persons to protect them against the acquirements of typhoid fever.

PREVENTION OF CARDIAC INSUFFICIENCY

Mayer (reviewed in *Wien. Med. Woch.*, 1912, No. 28) recommends the systematic administration of small doses of digitalis in any cardiac disease, for the purpose of preventing cardiac insufficiency without waiting for serious disturbances.

Dr. Burggraeve acted upon this idea a long time ago when he advocated the administration of digitalis in all febrile conditions, because in them the heart is always under a strain, while the repeated administration of small doses of digitalis prevents cardiac exhaustion by its characteristic action.

THE LACTIC-ACID BACILLUS FOR CATARRHAL ENTERITIS

In a review of the pathology and treatment of chronic intestinal catarrh, Dr. Karl Glaessner (*Wien. Med. Woch.*, 1912, No. 32) says that in diffuse catarrh of the intestines, and especially in cases where the colon is involved, the administration of bacillary preparations is to be recommended. By this means it is frequently possible to alter the intestinal flora decidedly and to suppress or eliminate the harmful bacteria which are flourishing in the intestines. Glaessner mentions the administration of artificially soured milk.

As many of these friendly bacilli are destroyed by the acid gastric juice, Glaessner recommends to neutralize the acid of the stomach before the administration of the bacillary preparations; or to administer these bacilli in agar-agar, because this is not affected by the gastric juice.

DIET IN SPASMOPHILIA

In a paper contributed to the *Therapeutische Monatshefte* for May, Dr. W. Raabe calls attention to the fact that cow's milk has

an unfavorable effect upon children afflicted with spasmophilia, that is, children who have a tendency to convulsions, either local or general. It is desirable, therefore, to eliminate cow's milk in all cases of spasmophilia, especially in the presence of laryngospasm. The author has seen very satisfactory results in children from nine months to two years old from the following diet:

Soups prepared from flour (5 percent) in amounts of 150 to 250 Grams; to these were added 8 Grams of extract of malt or 1 1-2 "lumps" of sugar. Once daily he permitted a sandwich without butter, the sandwich being a breakfast roll (25 grams) and ham sausage, the kind known in Germany as "mettwurst"—and a very excellent sort of sausage it is. On other days he ordered two meals, to consist of soup made with grits, considerable amounts of vegetables, jam, a little meat, and, later, potatoes.

CALCIUM CHLORIDE IN ASTHMA

C. Kayser (noted in *The Prescriber* for May, 1912) has found calcium chloride a useful prophylactic in cases of bronchial asthma. He gives a 5-percent solution in tablespoonful doses in milk every two hours, and finds it eases respiration and causes the bronchial secretion to come away without trouble. He recommends the drug as worthy of trial.

CARBOLIC ACID IN ERYSIPELAS

Lodi (noted in *The Prescriber*, May, 1912) employs for the treatment of erysipelas a solution of 20 drops of phenol in about 6 drams of glycerin. Patients suffering from erysipelas show a marked tolerance to phenol, and no danger of the absorption need be apprehended. The solution is simply painted on the affected area and on a portion of the skin surrounding it, care being taken to avoid mucous membranes.

AUTOGENOUS VACCINES IN PYORRHEA ALVEOLARIS

V. G. Best (noted in *The Prescriber*, May, 1912) discusses the most satisfactory method of treating pyorrhea alveolaris, which, in his opinion, is the injection of a vaccine prepared from the patient himself. As a rule, only small quantities should be injected at first, and the opsonic index should be estimated in the intervals, in order to determine, firstly, whether the doess are being given in suitable quantity, and, secondly, which is the proper time for giving the next dose.

Local treatments consist in the application of iodine to the gums and the frequent washing out of the pus-pockets with hydrogen-dioxide solution by means of a fine-nozzled syringe. Carious teeth should be removed.

THYROID GLAND IN RHEUMATOID ARTHRITIS

W. J. Midelton (*Practitioner*, Jan., 1912) says that the treatment of rheumatoid arthritis by means of thyroid preparations is based on the hypothesis that there is thyroid insufficiency. The dose should be small; in some cases 1 1-2 grains (0.1 Gm.) once daily may suffice. A dose of 5 grains (0.3 Gm.) three times a day should be given only in cases in which definite myxedematous symptoms are observed.

The drug should never be pushed to the extent of causing such symptoms as headache or diarrhea. It is generally advisable to stop the drug for a few days at intervals. The effect on the pulse-rate and the blood pressure should always be watched. Notes on three cases are appended.

ANESTHETICS IN CHILDREN

For a healthy child the best and safest anesthetic, according to *Archives of Pediatrics*, July, 1912, is a small amount of nitrous-oxide gas, just enough to deaden the sensibilities, followed by ether, given by the open or by the closed methods. Feeble or anemic children are best anesthetized by ether administered by the open drop-method.

CONCERNING MARMOREK'S SERUM

In a report on his results in the treatment of ten cases with Marmorek's antituberculosis serum, Dr. John P. Mitchell (*British Medical Journal*, Feb. 10, 1912) says that two methods of injection are used, namely, the hypodermic and the rectal. The former is supposed to be beneficial in acute and rapidly advancing cases, while the latter is more efficacious in the chronic and apyretic forms. The great drawback to the subcutaneous injection is hypersensitiveness, which is common, to the injection of all serums.

The dose used, in the author's cases, was 2 1-2 Cc., given hypodermically, until anaphylaxis was observed, when 5 Cc. was given, rectally, daily for from fourteen to

twenty-one days. This was followed by an interval of seven to ten days without serum, which was again followed by daily injections for fourteen to twenty-one days. This routine was carried on as long as the condition demanded it. Marmorek recommends that, even after recovery seems complete, weekly doses of 5 Cc. should be given for several months.

While in the ten cases which Dr. Mitchell reports a fairly good effect was noticeable in at most four, he points out that some of the cases were far advanced and of long standing, and he believes, nevertheless, the following conclusions to be warranted:

1. There is no danger in administration, apart from anaphylaxis, and this can be overcome by adopting the rectal method.

2. In certain cases the general improvement is most striking, although physical signs are not altered to a similar extent.

3. The undoubted success obtained in some of the cases justifies further clinical trials.

SUPRARENAL GLAND IN DYSPNEA AND DROPSY OF CARDIAC ORIGIN

Dr. J. C. Voigt (*British Medical Journal*, March 9, 1912) says that, aside from the established and customary drugs that are employed in dealing with failure of compensation in heart affections, suprarenal gland and its preparations can be relied upon in some instances. The solution of the extract of the gland may be administered, either hypodermically or intravenously, or the gland-substance may be given by the mouth in tablet form.

Dr. Voigt has treated with this drug several patients having cardiac trouble in whom dyspnea and dropsy were prominent symptoms. In all cases the dyspnea was relieved more or less, sometimes by a hypodermic injection of from 5, 10 or 15 minims of a 1 : 1000 adrenalin solution, at other times by 5 grains of the suprarenal-gland substance administered by the mouth.

In the first case, the urine increased, during six days of suprarenal treatment, from 26 ounces, to 37, 49, 51, 111, and 125 ounces. At a later period the urine had again become very scanty, measuring on one day only 18 ounces. Adrenalin was then given subcutaneously three times and continued during the following day, without diminishing the salt in the diet, with the result that the next day 20 ounces of urine were voided, and, on the three following days, 43, 116, and 102 ounces, respectively.

In another case, where the patient could not be brought to limit herself to the salt-free diet or to an exclusive milk diet, ordinary diet was continued and two hypodermic injections of 7 to 10 minims each of adrenalin, 1 : 1000, were given daily. In this case the 24-hour amount of urine increased, from 29 ounces, to 37, 49, 76, 74, and 93 ounces. After this the amount of adrenalin was diminished and the treatment continued for a few days longer, with the result that all dropsical swelling that had been present disappeared. The albumin disappeared from the urine, which was secreted in large amounts.

A CASE OF HEART WEAKNESS TREATED WITH CANE-SUGAR

Dr. Harry Dingle reports, in *The British Medical Journal* for January 13, 1912, a case of failing heart in a plumber, aged 28, which followed upon severe exertion several months previously and probably involved damage to the mitral valve.

The heart action was suggestive of some irregularity in the aortic valves. It was rapid, irregular, intermittent. There was decided ascites and some edema of the skin over the lower abdomen. The urine showed no albumin. Rest in bed, together with nourishing diet, tincture of digitalis, tincture of nux vomica, and magnesium sulphate failed to improve matters, nor did any modification of the drug treatment do so. The patient's condition became much aggravated, although very occasionally he seemed to be improving. The ascitic fluid was drawn several times.

Seven months after the patient had presented himself for treatment, and a little over one year after the first injury, the doctor commenced the sugar treatment, ordering the patient to take five ounces of Glebe's granulated cane-sugar during the day, continuing, however, with small doses of digitalis. A few days later, all medicines were discontinued, with the sole exception of occasional doses of magnesium sulphate and calomel. The sugar was continued, usually in the full amount of five ounces during the day. There was occasional nausea. After one week some subjective improvement was noticed, which became more decided in the course of another fortnight. The appetite was good, the ascitic fluid did not increase, and the heart-sounds gradually became more regular and the pulse stronger.

With one slight relapse, due to a mental shock, the patient continued to improve

steadily and was practically well in a little less than six months after the cane-sugar treatment was instituted. Only twice since beginning the sugar treatment had the patient taken any cardiac drug, and then only for a few days. He never again required tapping; and the author attributes his remarkable improvement solely to the cane-sugar.

Another important point which the author makes is, that before beginning with the sugar, the patient was forced to take aperients almost constantly, but hardly ever took any at the time of the report.

THE EFFECT OF CANE-SUGAR ON THE UTERINE MUSCLES

In a correspondence printed in *The British Medical Journal* for January 6, 1912, Dr. H. Shaheen says that the action of cane-sugar of increasing the energy of the uterine contractions in labor has been made use of by French people in inducing an otherwise slack uterus to produce good effective labor-pains. Sugar is given in solid form or in solution, and apparently with good results.

Referring to an Egyptian custom of giving infusion of caraway seeds well sweetened with sugar for at least one week after delivery, in order to hasten and increase the mammary flow and to bring about a speedy involution of the uterus, Shaheen holds that whatever good effect may be obtained from this medication is more due to the sugar than to the caraway seeds, and he suggests the employment of this home remedy in cases of sub-involution of the uterus when the administration of drugs may have some retarding influence on the mammary secretion.

TREATMENT OF THE HEMORRHAGIC TENDENCY IN TYPHOID FEVER

Dr. N. E. Wilson, in an interesting paper in *The Journal of the Kansas Medical Society* for August, says that twenty percent of all deaths from typhoid fever are due to hemorrhage, and he believes that the loss of blood in these cases is out of proportion to the pathologic lesions. He assumes that this discrepancy is due to changes occurring in the blood during typhoid fever and which retard clot formation by diminishing the coagulability of the blood.

In support of this idea, Dr. Wilson calls attention to the fact that epistaxis occurring early in the disease usually is easily controlled, but that in the second or third week of the disease it is very apt to require packing of the nostril, and may frequently be alarming and even fatal.

Recalling that fibrin is formed by the action of a fibrin ferment, or fibrinogen, in the presence of calcium chloride, the author believes that the chlorides are diminished in typhoid fever and that therefore fibrin formation is slow, resulting in a more fluid condition of the blood and in a retardation of clot formation.

Since calcium chloride is said to increase the coagulating power of the blood and since, further, it is excreted almost entirely by the intestines, the administration of this remedy would give an excess of calcium just where it is most needed in case of intestinal hemorrhage.

The author says that for the last four years he has administered calcium chloride to his typhoid-fever patients as a matter of routine. Beginning with the diagnosis of the disease, an adult receives 5 grains of the chemical, well diluted every four hours for the first two weeks, and, if the case holds on, the drug may be repeated for a few days in the fourth week. The period of rest during the third week is observed, because excess of the drug would cause a retrograde metamorphosis.

Since he began with calcium chloride, the author has had 30 cases of typhoid fever in which he followed this treatment. Of these 30, all were typical cases. No hemorrhage occurred in 27 patients, and the other 3 showed only traces of blood in one stool each; in no case did the loss of blood amount to one ounce.

No ill effects have been observed, and the author believes that the three patients, in whom there was a trace of blood in one stool each might have had severe hemorrhages had it not been for the previous course of calcium chloride.

WHEN AND HOW TO USE DIGITALIS

Writing in *The Interstate Medical Journal* (August), on the question of how and when to give digitalis, A. E. Taussig says that, in the treatment of heart disease, the interest centers in the therapeutics of broken compensation. Valvular lesions as such rarely require treatment. It is the incompetent heart-muscle that demands our care, and the treatment of this condition is, to a large extent, independent of the nature of the lesion responsible for the broken compensation.

GLEANINGS from FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M. D.

Pharmacodynamics of Codeine

ONE Gram of opium contains from 2 to 5 milligrams of codeine. This alkaloid was discovered by Robiquet in 1832. Up to 1886 it was obtained from opium, hence the high price of it then. At that period Knoll patented a process by which codeine can be derived from morphine by methylizing the latter. Codeine is, therefore, the equivalent of methyl-morphine.

The alkaloid forms colorless crystals that are bitter and of alkaline taste. One part of it dissolves in 120 parts of cold water. The phosphate of codeine contains 73.2 percent of codeine (pure); it dissolves in 3.2 parts of cold water. Hydrochloride of codeine contains 85 percent of codeine (pure), and is soluble in 26 parts of cold water.

In dosimetry we employ the basic codeine.

The action of codeine resembles that of morphine; however, its narcotic effect on the higher cerebral centers is less intense than that of morphine, while, on the other hand, codeine exaggerates the reflex excitability of the spinal cord. This exaggeration is the cause of the pupillar dilation which is observed quite often after the ingestion of codeine. Four-fifths of the codeine incorporated is eliminated by the kidneys and the intestines.

Codeine interferes with the respiration and the circulation less than does morphine. In the human being codeine, even in large doses, does not produce a true narcosis. According to Meyer and Gottlieb, codeine is to be regarded as a very mildly acting morphine.

It leaves the blood pressure intact and slows the respiration very little. It exercises an excellent action on cough, and 3 to 6 centigrams (gr. 1-2 to gr. 1) of codeine acts on this symptom the same as 5 to 10 milligrams (gr. 1-12 to gr. 1-6) of morphine.

Codeine exercises a sedative influence on the sympathetic and pneumogastric nerves. It has the great advantage of calming gastro-intestinal pains, and of doing this without diminishing the secretions or provoking constipation; but, against bodily pains, in the delirium of drunkards, and for the phenomena in morphine withdrawal, the therapeutic action of codeine is null. Codeine does not produce that feeling of general well-being technically called euphoria, and such a thing as codeinomania is hardly known to exist, for it is just this charm of euphoria which makes morphinomaniacs.

The succedanea of morphine that have no specific action on the brain-cortex do not produce that feeling of well-being. This fact, which has been well established by Meyer and Gottlieb, is of vast psychologic importance. It enables us to comprehend the biomechanics of cenesthesia (from the Greek *koinos*, common, and *aisthesis*, feeling), that is, the general feeling or sense of conscious existence, or the sensation which we have of the existence of our bodies.

At every moment of our lives we are struck by a multiplicity of influences, and at the same times, also, complicated chemical reactions take place within our tissues. A continuous metabolism is going on in us, made up of two phases, the one being molecular destruction (catabolism) the other being reconstructive (anabolism). And these changes are signaled in the cerebral cortex of the centripetal neurons.

But what is the nature of such a signal? It is made up of feelings, of sensations more or less clear, more or less well defined. These sensations are agreeable when the biologic equilibria do not deviate any from the normal or when they are just on the way to return to the normal. Or, contrarywise, these sensations—feelings—are painful, disagreeable, alarming when the anabolistic process finds it difficult to compensate the demolition which takes place, or when it does not compensate it at all.

Cenesthesia is, therefore, made up of two orders of factors—agreeable ones and disagreeable ones. The agreeable ones signal the restitution of integrity, i. e., restoration of health; while the others, the disagreeable ones, signal an outcry of distress, by the organism, that it is being injured in its integrity. The cenesthesia rests at the bottom of our being, a loom, as it were, upon which are to be stretched all the warp and the woof of our sensations that are destined to modify the circumstances of our lives.

When, now, those sensations that are the reecho in our souls of the metabolic actions going on in us are suppressed, then euphoria takes place in us. But what is it that produces it?

Among the actions that are recorded in our central organ, some are good and others are bad, and when the good ones prevail over the bad ones, then we have the sensation of well-being. But this same sensation comes from thence when the receivers of them are narcotized! How shall we interpret this? Here let us call to mind that narcosis is due to a diminution of catabolism.

The narcotic drugs hinder the access of oxygen necessary to burn the waste in the neuron bodies; they inhibit it by preventing catabolism, and also they prevent the painful sensations connected with it. The narcotic action does not stop with the neuron-cell, but it extends to the nerves, which are but its prolongations.

The catabolism being checked, there ensues, no doubt, a better nutrition, increased anabolism of the neuron. If this were not the case, then codeine would not have that remarkable effect in neurasthenia and diabetes which we recognize in it.

Clinical observation permits us, therefore, to say that the sensations of displeasure and of pain are connected with catabolism, and that those of pleasure and well-being are connected with anabolism, with the repair of wastes resulting from the expenditure of energy in the struggles of life.

Now let us arrest or only diminish catabolism, without total suppression of anabolism, and we produce the sense of euphoria.

You see here that alkaloidotherapy allows us to dissect the organ of the soul during life and to cast a glimpse into the profoundest depths of our being.

Let us now examine the action of codeine in the neurasthenic person.

Codeine acts on the cerebral cortex as a very mild narcotic, diminishing pain a little and so augmenting also a little the sensation of well-being. But, fortunately, this is not all.

The neurasthenics are an anxious people, they have precordial pangs, and they digest badly because their sympathetic nerve is out of balance and vacillating. With them, displeasure and psychic suffering appears far more quickly than in normal persons, because their greater catabolic susceptivity and the greater wastes in them allows but the slowest reconstruction. Codeine being a pneumogastric and sympathetic narcotic, it diminishes this too easy catabolization, and arrests the dysesthesia, this outcry of the organism in despair, and brings calm unto those regions where but lately agitation and alarm reigned. This calm has its repercussion in the cerebral cortex, mirroring the state of the entire organism, and peace reappears with euphoria.

This condition favors the restoration of integrity of the highest neurons—those representatives of our individuality, those organs of the subjective echo which speaks in us and announces to us every instant the condition of our being, telling us our situation in respect of those grand forces which ceaselessly are changing in us and of whose play we are the involuntary objects. This calm favors anabolism, for pleasure induces hyperemia of the cerebral cortex, while pain induces anemia there and by this throws us into asthenia and into psychasthenia.

The action of codeine appears to us, therefore, as grand and useful. Along with the reconstructives of the neurons, such as lecithin and glycerophosphates, codeine is the great medicament for the neurons of our epoch, an epoch of transition, when humanity is leaving the torpor of dogmatism and is entering upon a time of experiment and free examination of the fundamental problems of our intellectual and social future. The shadows of the Middle Ages, which are yet cast upon us, are becoming less somber.

The useful doses of codeine in neurasthenia are from 2 to 10 centigrams three times a day. The dosimetric granules of 1 centigram each are the most acceptable and most certain.

Against the symptom of cough, 5 centigrams of codeine should be given at one time. The scattering of doses is here—exceptionally—not only unnecessary, but even inefficacious. —Dr. E. Robert Tissot, in *La Dosimetrie*, Jan., 1912, p. 87.

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[In so far as Dr. Tissot seems to favor the continuous or prolonged use of codeine in neurasthenics, we must disagree with him. While it is far less dangerous than morphine,

it most assuredly is a habit-forming drug, as almost any physician of extensive experience can testify. Under no circumstances should its use be continued over long periods of time, and especially is this warning to be kept in mind in the treatment of nervous individuals, already too inclined to adopt any remedial agent which will give them temporary relief.—ED.]

THE LAW OF ENTROPY

In a paper on entropy (from the Greek *"entrepoo,"* I turn in, I change into), of which so much discussion is had at the present day, and which appeared last January in *Unsere Welt*, the writer, Prof. P. Gruner, concludes as follows:

The purport of the entropy law extends to all the universe. The heat-energy which constantly accumulates on our earth, and which is then radiated out into space and seems to be lost, does in reality contribute to the tendency toward the inevitable equalization of all forms of energy. Our spiritual eye looks pensively into the future. We see before us the end unto which this process leads, slowly, but incessantly—the death of the universe! Effected, not by a sudden catastrophe, but as the result of the perfect equipoise of energy.

When somewhere in the distant future the totality of the world of stars will have become but one heap, consisting of atoms, all of them pendulating hither and thither in disorderly manners and near to each other, a gigantic mass of even temperature throughout, then will entropy have triumphed, in having reached its maximum; all getting-to-be and ending-to-be will then be but a dead "be," and will then have given place to an absolute graveyard quiet.—*Geisteskampf der Gegenwart*, 1912, p. 198.

DUODENAL ULCER AND GASTRO-ENTEROSTOMY

Dr. R. Blum presented before the Gesellschaft der Aerzte in Wien, at its session of June 28, 1912, a man who was troubled for sixteen years with a gastric affection which was thought to be a neurosis. He had felt pressure and pain in the stomach between an hour and a half and two hours after the ingestion of food, nausea, and vomiting. Such periods of gastric trouble alternated with periods of perfect well-being. During a sick-period, the man lost as much as 35 kilos (70 pounds) in weight. In his last sickness, there was pain on pressure below the xiphoid process, while the x-ray showed a hurried passing of a bismuth meal from the stomach into the intestine. There was also seen a spot in the duodenum covered with bismuth about the size of a 2-heller copper coin [which THE GLEANER would guess to be the size of our present one-cent coin] which persisted for a considerable period before it disappeared.

Laparotomy showed a radiating cicatrix in the duodenum, a thickening of the head of the pancreas and a growing together of the same with the pancreas. The operation was that of a posterior gastroenterostomy. The patient up to the date of reporting had remained free from the trouble, indicating a permanent cure.

Dr. S. Kreuzfuchs remarked that patients with ulcer of the duodenum get rid of this trouble after even a short stay in the country. An x-ray examination of a duodenal ulcer shows a persistent bismuth spot and an absence of duodenal reflexes. As long as the duodenum functions normally, it regulates the pyloric action, but when it becomes diseased, then the pylorus gaps and the food passes though continually or with only short interruptions. In this case the duodenum is irritated by the gastric acids or mechanically.—*Wiener Mediz. Wochenschr.*, 1912, col. 1910.

PITUITARY GLAND IN RACHITIS OF CHILDREN

Dr. Rudolf Klotz, in the *Muenchener Medizinische Wochenschrift* (1912, No. 21), discusses the treatment of rickets with pituitary gland. Theoretic considerations on the relation of the hypophysis to the metabolism of phosphorus and of the importance of phosphorus in rachitis induced the author to institute a course of treatment of five rachitic children, of the ages from one to two years, with preparations of the hypophysis in combination with calcium therapy.

The results were surprisingly favorable. The walking, the cutting of teeth, the closing of the fontanelles, the cheerfulness, and the general condition of the children improved within a few weeks. The author thinks that the pituitary preparation acts as a stimulus on the phosphorus economy of the body, which is under the control of the hypophysis. Thus a partially deficient functionizing of the metabolism of the phosphorus in the organism is helped.—*Wiener Mediz. Wochenschr.*, 1912, col. 1918.

MISCELLANEOUS ARTICLES

Treatment and Diet in Typhoid Fever

IN the following I will attempt to outline briefly what I consider the rational treatment of typhoid fever. The success, in recent times, in the prevention of epidemics of this disease I attribute to the discovery that its spread is due to the dissemination of excreta from the patient, and that, hence, the most important part of the prophylaxis consists in the care exercised in disposing of the same. It was a recognition of the danger from this source that suggested the idea that the house-fly might be a carrier of the typhoid germs; and I believe that I was one of the first to mention this possible means of transmission.

During the early stages of a disease under suspicion, the physician should not fall into the error of making a positive diagnosis of typhoid fever, for it may turn out to be an ordinary gastroenteritis; but neither should he make the equally culpable mistake of assuring the patient and his friends that the disease is not typhoid fever, the more so, as the mild cases are likely to prove the foci for its dissemination. For this reason, the mild cases, those in which the diagnosis is doubtful, should be as carefully watched as those in which the diagnosis is beyond question.

The first thing should be isolation of the patient and most vigorous care of all the excreta from the rectum, bladder, mouth, and nose. Even though the discharges from the mouth and nose are not positively known to harbor the bacillus, the impression on the patient and the family will be a good one, provided the physician is careful to state that the disease may not be typhoid fever—of which he can not be sure for several days.

Formalin is a very convenient, though not a perfect, disinfectant. Besides, it is excellent for driving out and killing the flies. A teaspoonful of this standard formalin to one pint of water sprinkled over the carpet and bed will generally keep the flies away from the patient and out of the house, especially the few that may enter a well-screened dwelling.

The bed-vessel should contain a pint of water with a teaspoonful of the formalin solution, ready for use; or at least water should be in the vessel ready for the addition of formalin just before the patient uses it. The bed-clothing and other clothing used about the patient should be kept from the rest of the family. The best place is in a boiler containing water, and they should be boiled for about twenty minutes before allowing them to enter the general washing of the family.

After waiting on the patient, the nurse should never handle things about the house, until her hands have been thoroughly washed. The nurse should have nothing to do in the kitchen.

When I went to college the sheet-anchor in the treatment of typhoid-fever patients was the Brand cold-water bath, but this has been largely discarded. A modified bath treatment is advocated and successfully used, but it is hardly adapted to family practice, and as a rule is superfluous.

The sheet-anchor of treatment, as I have found it for the past nine years, is, basally, the "clean out, clean up and keep clean" procedure.

At the beginning of medication, when the patient is first seen, unless there are other indications, I order calomel every half hour for three to six doses, preferably giving calomel and podophyllin together, 1-6 grain of each at a dose, followed by saline laxative. This course is repeated the next day if required. Next I prescribe the indicated intestinal antiseptics for the first eight or ten days. My preference is for the sulphocarbolates, either separate or the sodium, potassium, and calcium salts combined. If administered in tablet form, it is well to order the nurse to crush them before administering; but they may be given in solution—in hot water, if preferred. At times it is well to alternate the sulphocarbolates combination with bismuth and salol. Another antiseptic combination of which I frequently

make use contains bismuth salicylate, salol, and guaiacol carbonate.

To keep up elimination, a rectal enema of normal salt solution may be resorted to occasionally. If fever gets high, a liberal dose of castor oil will remove the infectious material from the bowels and at the same time tend to reduce the patient's temperature. The practice of giving a dose of castor oil every second or third day, unless contraindicated, is not a bad one. This purging usually brings the fever down, while a salt-water enema will do the rest.

As to fever remedies, the coaltar antipyretics may be given, with caution, if associated with heart stimulants, and then for only a short time; but as a rule it is best not to resort to any of these sedatives. The combination which has given me best results when there was hyperthermia contains aconitine, gr. 1-800; digitalin, gr. 1-64; and veratrine, gr. 1-128. These granules (the defervescent compound) may be dissolved in water and given every half to three hours, or as indicated.

There should also be at hand means for sustaining the heart, when needed. In my hands, the combination of digitalin, gr. 1-64; strychnine arsenate, gr. 1-64; and aconitine, gr. 1-800, yields very satisfactory results. This granule may be dissolved in water and given every half to three hours. These are reliable and safe remedies.

For the thirst, plenty of sterile, cool (not cold) water, or also warm water (as warm as the patient can drink) should be allowed.

In the matter of diet in typhoid fever, my watch-word is: No solids, no meats, little or no milk. I stopped giving milk in this disease in 1904 or 1905, having discovered that, after the patient had partaken of this food, his fever would increase, and often delirium would ensue, even after leaving off all solids. These patients are not able to digest the casein, and this then seems to produce toxins, which increase the work of the kidneys, causing backache, headache, and so on. In some cases, however, I have prescribed buttermilk in small quantities.

Barley water, rice water, oatmeal water, beef broth or any other kind of broth, when made right and strained through a clean boiled cloth, will sustain the patient, and with these foods, if the elimination is proper, there will be no headache, only little backache, and no delirium to speak of, and the patient will not be greatly emaciated.

You will readily understand that with this diet you cannot sufficiently nourish the patient with three meals a day; still, during the first week or ten days, that may be all the patient desires. However, if the patient will take a sufficiency every two or two and one half hours, he will be well nourished and want very little water—will feel comfortable, sleep well, have no delirium, and his recovery will be as speedy as can be expected. The juices from ripe fruits may be added to the dietary under proper supervision, while a little later on this diet can be supplemented with semisolids.

In 1909, interest was awakened in the subject of diet in typhoid fever, by Coleman, who advised a diet which provided as much food-value as a normal individual requires in health. As he puts it: "In all fevers the body demands as much energy and heat as at rest in health."

The following scheme for feeding is in use at the N. Y. Postgraduate Hospital.

7 a. m.—One egg, soft-boiled or poached; toast, one slice; butter, one pat; coffee, 6 ounces; cream, 2 ounces; lactose, 1 ounce; cereal, 5 ounces; cream, 6 ounces.

9 a. m.—Milk, 6 ounces; cream, 1 ounce; lactose, 1 ounce.

11 a. m.—One egg; one mashed potato; small cup custard; toast, one slice; butter, one pat.

1 p. m.—Repeat that of 9 a. m.

3 p. m.—Lemonade made as follows: Water, 8 ounces; lactose, 3 ounces; boil two minutes; add lemon to flavor; ice.

5 p. m.—One egg; apple sauce, one tablespoonful; cream, 2 ounces; lactose, 1 ounce; tea; cream, 2 ounces; lactose, 1 ounce; sugar, to flavor.

If awake at the hours of 1 and 4 a. m., repeat either the 9 a. m. items or the lemonade mixture.

This furnishes about 3800 calories in twenty-four hours, and is the food-value for a patient of 150 pounds. It may, of course, be changed to meet requirements.

In the beginning, the food is reduced to about 700 calories, or, as you will see, to about one-fifth the quantity given in this list. On the tenth day and from then on, the diet is increased so that the patient receives the required value for a patient of his weight.

This, of course, is for hospital practice, but is a good guide for a family practitioner—something that gives him a basis to go on and confidence in his own work.

The ideal dietary for the typhoid patient is one which meets the needs of the organism as regards increased tissue waste and increased

heat production. The latter is more important than the former. In quantity, the food should be well within the powers of the patient to digest and assimilate, and, after utilization, well within the powers of his excreting the products of metabolism.

It should be of such material that, in the event any or all is undigested or unassimilated, the end-products of its alteration by bacteria will present the minimum of toxicity and will furnish the poorest culture medium.

It is for this reason that I limit the use of protein. This substance calls upon an overloaded and irritated kidney to excrete not only the products of nitrogen metabolism and bacterial toxins but the end-products of proteid putrefaction in the bowel.

As to cow's milk, plain or fermented, does it meet the requirements of the typhoid patient? I do not believe that it does. Its end-products in the bowel are toxic. The only enzyme which is able to attack it, in the gastroenteric tract, is trypsin, the secretion of which is limited. When casein is formed from caseinogen by the action of lime salts, cow's milk precipitates in large curds and the action of the ferment is limited to the surface of the curd; while bacterial activity continues on the interior as well as on the exterior.

The dynamic value of the one liter of milk is given as about 650 calories. If a patient is to receive 3000 calories a day, he must digest and assimilate five liters of milk—an impracticable quantity.

There is also great relative excess of protein in this milk diet, an excess over and above what is good for a normal man whose digestive processes are active. Other objections to the use of milk are found in the fact that it may add further infection to the intestinal contents, that the casein calls upon the kidneys for much work, and it furnishes an excellent culture medium for intestinal bacteria.

R. WILLMAN.

St. Joseph, Mo.

PRACTICAL STUDIES OF URINARY ANTISEPTICS

Recently some interesting studies have been made as to the efficiency of the urinary antiseptics, so called, under various conditions, especially as regards the influence of acid and alkaline urine. Some of this work is epitomized in an editorial in *The Journal of the American Medical Association*, July 6, 1912. It reads as follows:

THE CONDITIONS FOR THE EFFECTIVE ACTION OF URINARY ANTISEPTICS

An accurate knowledge of the exact pharmacologic behavior of the drugs employed is a fundamental requisite of the best type of therapeutics. A considerable number of drugs are given as urinary antiseptics by way of the mouth. The urine is an excellent nutrient medium for microorganisms when once they are established therein; but further than this, its reaction is variable through a considerable range of mild acidity to distinct alkalinity, so that the effect of any chemical compound therein may be modified from time to time by the prevailing reaction of the secretion. The usefulness of hexamethylenamin, sold under a variety of trade names, as a urinary antiseptic is established by the consensus of a wide clinical use. The theory of its action centers in the liberation of formaldehyde from the compound on treatment with acid. The object in giving hexamethylenamin is to administer formaldehyde.

Dr. Jordan[1] has reported experiments in England which bear on this question. He observed the growth of familiar bacteria in urine in which the reaction was experimentally modified. The degree of acidity of the urine is an all-important factor in the efficiency of urinary antiseptics. The antiseptic power does not pertain to urines of low acidity or to those which are alkaline. If a urine is normal or infected with an organism which does not produce alkaline fermentation, it can readily be made more acid by giving acid sodium phosphate, until the amount of formaldehyde produced from the hexamethylenamin in conjunction with this reaction is sufficient to inhibit completely the growth of any organism in the urine.

Unfortunately only a limited number of the conditions in which it is desired to accomplish such antisepsis are attended by the excretion of acid urines. Ammoniacal urines may prevail, as in cystitis. Investigation of other drugs which are mildly antiseptic, notably salicylic acid, the benzoates and sandalwood oil, indicates that the last alone promises successful application in those cases in which they are most needed, namely, with an alkaline urine. The chief treatment of such cases must probably for the present consist of local measures, with the possible employment of sandalwood oil by the mouth. For the benefit of our pharmacologic colleagues we may repeat one statement by Jordan: that the discovery of a substance which would, in alkaline urine, exert something approaching the antiseptic power of hexamethylenamin in acid urine would be an immense advance in therapeutics.

In connection with Jordan's study we have been interested in the report of Guiard's work, originally printed in the *Annales des Maladies Genito-urinaires*, in 1905, and reviewed in *The Therapeutic Gazette*. He is in accord with Jordan, that hexamethylenamin is only very feebly antiseptic in alkaline urine, if at all, but becomes powerfully so when the urine is rendered decidedly acid by the simultaneous administration of acid sodium phosphate, or (as suggested by the editor) bitartrate of potassium. The rule does

[1] Jordan, A. R.: Urinary Antiseptics: An Experimental Investigation. Proc. Roy. Soc. Med., 1911, No. 2.

not seem to hold good, however, when the infecting organism is the colon bacillus; in this instance the conjoint use of potassium citrate with the hexamethylenamin, thereby alkalinizing the urine, seems to be decidedly beneficial.

According to the editor of *The Therapeutic Gazette*, when the urine is alkaline and sandalwood oil is given "putrefaction occurred as rapidly as if it were not given." This is not in accord with the statement in the *Journal* editorial, just cited. Sandalwood oil seems to be an exceedingly effective deterrent of bacterial growth when the staphylococcus is the organism that causes the trouble. With the colon bacillus it is almost inert.

We regret that there is no study of the action of arbutin in these cases. We have come to look upon it as particularly effective in cases of cystitis, in which there is likely to be alkaline urine. In such cases, or when there is vesical or urethral irritation from any cause, its action cannot be duplicated by any other remedy. Arbutin is the glucoside of uva ursi, and in the urinary tract is broken up into glucose and hydrochinone, the latter being released in small quantities to bathe the genitourinary mucosa, where it exerts its antiseptic and tonic actions.

Laboratory studies of arbutin are under way and will be reported at a later date.

FROM A HOMEOPATHIC VETERINARIAN WHO BELIEVES IN THE ACTIVE PRINCIPLES

Although I am a veterinarian, your journal is the most welcome visitor I have, and I would strongly recommend it to members of my profession. The perusal of its contents not only gives me pleasure but also very much practical information, since the application of drugs to disease is identical, in principle at least, in very many diseases both of man and beast.

I have been very much interested in watching the gradual adoption of bryonia and phosphorus by the regular members of the medical profession in their treatment of pneumonia and bronchitis—especially the former; and I have read their articles with no little quiet amusement, reflecting that they are at last awaking to the importance and benefit that attaches to these drugs in the treatment of this serious ailment, while I, in my twenty-seven years' practice, have been using them as my sheet-anchor, and they very rarely have failed me.

As a rule, the physician rather looks down upon us, as of a "lower grade"; and I remember well that in college we were positively snubbed by the medical students and termed derisively "horse-doctors," while they were "medical practitioners"—or hoped to be when graduated.

I have found that one can learn something from even the humblest, and I have always listened to any treatment advocated by laymen as well as professional people, and many times with benefit to myself and my patients.

This is an age of progression and evolution, but no branching out in other than the beaten path has ever been advocated without opposition. The men who first said the world was round were put into prison, and even to this day no new idea meets with any great encouragement until it has proven its worth, many times in the face of the most strenuous opposition, even from those who later become its firmest advocates.

My father was a veterinarian of the days of 1840, and his departure from the old style of "bleed and purge" met with strong protests by his clients, as unheard of, and as "faddical"; but now it is rarely that we resort to blood depletion as practised for everything in the olden days. My father became very much interested in the new science of homeopathy when my mother, then not yet married, was treated homeopathically, and cured, with no pitting and in quick time, of a severe case of smallpox; while of three others having the same disease in the same house and treated in the "regular style," two died and the other was very badly disfigured.

His investigations, together with the information derived from the practitioner who attended her, later led him to adopt homeopathy in his veterinary practice; but "under cover," since it was business suicide in those days to practise openly this line of treatment in animal practice. He later came into the open, and his success proved the value of the system. My father's adoption of homeopathy was based upon the principle of that method of selection of the drug, but the remedies were not used in the high potencies. Thus you see I was raised in homeopathy, and, while I have not adhered as fully as father did to the strict "letter of the law," there are a few of the old standbys that are in my case today, and among them aconite, bryonia, belladonna, and phosphorus will always be held indispensable.

Again we come to evolution in the adoption of alkaloidal products. Long may they last, for now we have *exact* dosage and *certainty*,

if they are pushed to effect. Keep your hammer going, doctor, for you cannot drive that nail too deep; yet, you have some awfully thick heads, among physicians and veterinarians alike, to drive it into. But "go to it," and their use will be universal when sufficient "jolts" have jarred the old-timer out of the old rut in which he has traveled so long.

Active principles and sulphocarbolates will cure a multitude of ills; and you cannot put "clean out, clean up, and keep clean" in print too much, or in too black type. In the treatment of equine pneumonia, particularly, my mainstay has been aconite (in the old days, but now aconitine) the first twenty-four hours, alternating with bryonia (now bryonin), and then bryonia and phosphorus (tincture) alternating hourly. When the appetite wanes (usually about the third day), I rely on eggs, milk, and stimulants, and carry my patients five to twelve days on this food *alone*. I give six eggs, two quarts of milk, four ounces of whisky (or half this quantity of alcohol), and two quarts of water three times daily. Horses will readily drink this, with the water added, while they will continue to refuse the milk undiluted. However, the bryonia and phosphorus are continued night and day, later being reduced to two-hour intervals. During the past two years I have lost but two patients out of an average yearly list of twenty cases.

Again I say, "Go to it," brother, and tell the regular that there are many things not dreamed of in his philosophy; hence, use alkaloids for certainty and exactness, sulphocarbolates for the "clean-up and keep-clean" process, and bryonia for pneumonia.

I could not hold in any longer, and simply had to tell you that *thinking* men believe you are on the right track and appreciate it.

VETERINARIAN.

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THE FOUNTAIN-HEAD OF PROFESSIONAL MORALITY

I can no longer engage in the activities of practice, because of advanced age and an organic trouble, and as I become separated from practice, I must necessarily deal more with theory and, with the aid of memory, collect what of value is to be found along the way I have come. Already there has risen before me much that I have seen and encountered, and, although more of it is haloed around with traces of greatness, I feel that some of it should be added to those many aims that have been given to the world's betterment. If, therefore, I shall find some suitable answer to some of the problems which have perplexed in the past and be the means of suggesting for the future what some one may turn into real advantage, I shall not only be content but make partial amends for many derelictions gone by.

I write this in my true character, as a physician who has been in the profession for fifty-eight years, who loves it, and cherishes the high hope that the honest and faithful discharge of its incumbent duties is the step toward immortality. My purpose in this will be, to select some of the many discussions which have been held in the journals and elsewhere to illustrate what I think has been the cause of so many failures to agree upon plans for reformation.

We all know how long and loud we all cried for regulation of fees; but we failed to agree on details, because of varied interests involved. The same was true when we discussed the propriety of advertising—the man of reputation could not feel the needs of the obscure. The proprietary man comes with his formula well underwritten, but that would at least divide the fee. The surgeon's faith in medicine grows less as his skill increases. The general practician, in his unremitting toil, has less to answer for, though he must resist the stereotyping press of self-interest.

Thus it is in every controversy in medicine. In all the learned professions, in war, in national disputes or individual variances, self-interest is entwined without or secretly enwebbed within. In plainer terms, my friends, selfishness is the first salient weapon the devil seized upon to fight for the destruction of human interests.

But, if selfishness has become the dynamic element of human affairs, then the caricature of Lord Byron assumes the habiliments of philosophy when he wrote that "this world is a bundle of hay, and mankind the apes who pull; each tugs it a different way." Jehovah appealed to that principle when he said, "In the day thou eatest thereof thou shalt surely die." The enemy used it when he denied the asseveration of Jehovah. Man acted upon it when he chose to eat, for, if to free self from the restraints of obedience would imperil no selfish interest, he could turn his back upon his friend to whom he owed his all, henceforth to go forth branded a a selfish man.

During the succeeding periods of man's history where Jehovah exercised his authority, both mediate and immediate, this perversion of nature was the source of untold

suffering and privation; whole cities and tongues were blotted out and their possessions given to others because of self-exaltation against reason and public interest. Then as now selfishness stood in the way of all equitable distribution of power and privilege.

The remedy applied then was only adumbrative of the sovereign cure to be on deck in the ripeness of time, and to prepare for its successful introduction and to the relief of the false idea that human character could be molded by force.

The wonderful records of Sodom and Gomorrah, the great city of Nineveh, the land-grabbing nations of Canaan, these, and others, all paid the price of selfishness, in spite of the warnings, yea, the pleadings of Jehovah, in that loving cry, "Why will you provoke me to anger, and to slay without mercy?"

In our own day the paramount belief seems to be to cure evil and adjust wrong by forcible means. When Jehovah administered justice more mediately than now, He demonstrated by many proofs—in addition to what has already been mentioned—that the effect would only be temporary, even though His great power should be involved.

So, commencing with Abraham, He let it be known that the remedy in all its effectiveness would be given. This promise through priest and prophet was kept fresh through the Jewish age until John.

In John the Baptist, or Elijah, we have the line dividing the Jewish and Christian dispensations, and His mission to point out to the people the Lamb of God who taketh away the sins of the world. The spirit of Jehovah says, "Hear Him."

Now, dear readers, I invite you, if you would understand this writing, to study the teaching of this Lamb of God. Remember that He, by immortal wisdom, is the promised remedy to the ages for evil. At it, as at other remedies, the unprepared revolted; but, unlike all others, it has pressed its claim, until that world stands aghast at its power. The little stone cut from the mountain is to fill the earth. Its authority must be reckoned with, the world's forward movement must have behind it the Christ force or progress will not avail.

I know that it will be said, with the emphasis of the final word, that the Christ ideal cannot be installed in business, because man's nature is unchangeable. But Christ says, his nature can be changed, and if he is not born again from his selfish greed into loving service, no calling will serve for more than a bundle of hay, each to tug it a different way.

The eternal Law was, love Jehovah, thy God, with all thy heart and thy neighbor as thyself. To make complete the remedy for all human ills, clothed in humanity so as to feel its wants filled with wisdom to read the unuttered thoughts, and the exemplar of the truth He uttered, He said, "Love one another."

Now we have the remedy. Measure your trials and difficulties by it, see if there is anything it will not cure. That this is a new and vital principle given to the eternal law by the Christ and the promised succor for all wrong, note its triumphs in the nearly thousand years of its life, as it withstood the ravages of combined opposition and brought peace and joy out of selfish strife.

Therefore, if this is given to take the place of force and in every trial proved effective, and by increasing numbers is being urged as the panacea of wrong, why not join the struggling band, why invent some new scheme, while the fight is on for the better plan? Love one another, do good to all men is the Christ ideal. This will solve the life-long problems, and nothing else will.

As the great physician-teacher He comprehended life and overcame death, with his magic power he brought back the light of life to the darkened windows of the dead, because, as a master physician, He knew whence the spark had fled.

With that comprehension which opened to him, as a thrice-read book, the complex variety of human conceptions of right and wrong, He threaded the masses of human life here on earth, to make known principles which will develop man into his most desired status. His three years of unqualified service, teaching as no man has taught, or can, teaching the ignorant and vicious, shows how He estimated its value.

And now I speak especially to doctors. How can we afford to ignore the authority of His wisdom? Are we not bound by the nature of the calling to exemplify as far as we may be the beatitudes as laid down by Him, and in the settlement of medical, social, and even political problems, to follow his program and to join the ranks of that part of our fellowmen, not to follow, but to lead in the forward movement for the uplift of our race and the universal reign of Christ?

We seek many devices to remedy wrong, but forget the plan of Him who knows. The greatest minds are turning to these thoughts. Few have the temerity to deny their pertinence, still fewer who do not at times feel their force. "For your life is hid with Christ in God." To deal with life as doc-

tors, it must seem a paradox not to recognize its author; and to give medicine and ask God's blessing upon it seems the height of wisdom. To toil for scientific truth and not know that God is its author is beyond endurance. Why not ask Him? Why not come, in the assurance of faith, to recognize the leadership of the Maker and the Ruler of the world?

The time will come when every knee must bend and every tongue confess. As physicians, we owe it to our Master, to our patients, who are His, and to ourselves, who have taken to tread in His footsteps, to lead in the fight for a regenerated humanity. The law of love must prevail, or civilization will pale and die.

Do good instead of wrong, help rather than hinder, serve rather than lord it over our fellows; these are some of the fruits of this amended law, and, with these applied to the professions, to society, to the world, their problems would solve themselves.

Of recent discussions, perhaps the most difficult of agreement is that of the limitation of human offspring. Under the reign of selfishness, no solution has been offered void of danger. Great ability was displayed in its discussion. The propounder almost wrested conviction from His frightened adversaries. Yet a solution of the question under prevailing conditions is impossible, because no remedy can be applied by antagonizing forces. But operating under the new law, with the fruits of love and helpfulness, numbers would cease to be a cause of complaint, and the world would be filled with joy and happiness, as well as people.

There can be no possible demurrer to these sentiments, unless it be the cry that the Christ ideals can not obtain in the business world. But remember that His teaching and His power is the great force with which we can rally the force of reform. His name is above every name, and in the language of one I venerate,

> "I know of a land all sunk in shame,
> Of hearts that faint and tire,
> And I know of a name, a name, a name,
> Can set that land on fire.
> Its sound is a brand, its letters flame,
> But, I know of a name, a name, a name,
> Will set this world aflame."

I know that it will be said, that these thoughts and this program are not a part of, and far away from, the discussions of practical medical topics and do not properly belong to medical journalism, and that our differences lead to more light as we attempt to reconcile them. But, I know that our profession is but a part of the great whole, called human society, and that we are inseparable from it, doing business with it, receiving favors from it.

The world is selfish. The doctor does move for the world, when there is money to pay the bill. We love our neighbors. Who are the neighbors? The man who fell among thieves at Jericho loved his neighbor, the Samaritan; but Christ says, sinners love those who do good to them, and straitway added a deeper significance to the law when he added, "Love one another."

This is the only cure for selfishness. The life-giving principle that is cultivated will bring forth in peace, joy, and happiness, and dispel the mist of misconception and restore the autonomy of the human race.

R. I. McQuiddy.

Lawrenceburg, Ky.

PUBLIC-SERVICE WORK FOR PHYSICIANS

Will you announce, through your columns, that the Training School for Public Service conducted by the New York Bureau of Municipal Research would like to have the names of several highly accredited physicians wishing to get into public-health work? We have in mind particularly one or two men who would like to qualify as experts in making sanitary- and health-administration surveys of cities in different parts of the country. We could not take on any man who does not give promise of ability to administer the many-sided divisions of health-work now included in a progressive health policy.

While we do not pay salaries, we are able to pay a stipend of from $900 to $3000, according to the previous experience and prospective immediate service of applicants.

Field-work will consist of analysis of board of health estimates, visits to milk-stations, various forms of inspection, such as of slaughter houses, nuisances, milk-shops, etc., statistical analyses and tabulation, and so on.

William H. Allen,
Director.

261 Broadway, New York City.

INGROWING TOE-NAILS

When I opened a copy of The American Journal of Clinical Medicine not long ago I was struck by a picture of toes, dissevered, curetted, maltreated.

In all the works called "Modern Surgery," and all called "Minor Surgery," I see the

same old picture of tortured toes and slashed toe-nails.

I have seen this so often, in so many journals and textbooks, that I feel like putting in a demurrer, and I believe this sore-toed generation will give thanks if told of a better way.

When a toe is beset with an ingrowing nail and is swollen until it looks not unlike a boiled lobster, and the owner of that poor toe gives most of his time to shielding it from unwelcome encroachments, then is the alert doctor's opportune time to demonstrate that there is positively some good in medicine and that the ever-ready knife is not the only thing.

Let that troubled pedal member receive several times daily, for two or three days, gentle brush touches with a 20-percent solution of silver nitrate, and the intensely sore and inflamed condition will soon pass into one of comfort and freedom from soreness.

After that, complete the cure by keeping crowded down around and under the offending corner of the nail, as often as needed, powdered nitrate of lead or persulphate of iron.

J. Q. MOXLEY.

Lewiston, Ida.

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[Our readers all appreciate practical suggestions like these, and we hope to have many more of them. These "little" ailments may be made a source of considerable revenue to the physician. As a means of helping to that end, we are now trying to persuade an educated chiropodist-physician to give us several short articles upon corns, bunions, ingrowing-toe nails and similar foot-troubles. He has partially promised to help us.—ED.]

INCREASING THE INCOME

Our good friend, Dr. John L. Irwin, of Detroit, has recently handed us a little item of his, originally published in *The Journal of the Americam Medical Association*, that is so much to the point that we are going to reprint it. It follows:

I have been in the general practice of medicine since 1890 in Detroit on the same lot on which I was born. For twenty years I trusted all applicants for medical aid, with results approximately as follows:

2 percent would pay me promptly.
13 percent would pay me only "when I went after them."
25 percent got out of paying me in every possible way.
60 percent did not pay me at all.

Jan. 1, 1910, I turned over a new leaf, and referred to other physicians all would-be patients who did not pay cash and had not approved credit. In 1910, the income from my practice was 98 percent greater than my average yearly income for the preceding twenty years and my expenses for 1910 were less than the average yearly expenses for the same period. Except for the fact that I gave my individual attention to my invalid mother for the three years prior to 1908, which cut into my practice considerably, I am unable to assign any other cause than this change of policy for the increase in income.

Since Jan. 1, 1910, I have had more time for reading, refreshment and sleep; and my present plan is preferable to that of those physicians whose ambition is to have the "largest practice" in a community at the cost of poor health or an early death.

CARBOLIC ACID IN BOILS, CARBUNCLES, AND FELONS

The July number of CLINICAL MEDICINE contains an excellent article, by Dr. J. M. French, on the use of phenol in the treatment of boils, carbuncles, and felons.

Instead of using the undiluted phenol, I generally dilute it to a 10-percent strength, and of this solution inject 5 to 10 drops into the swollen mass, without previously using the ethyl-chloride spray. Granted that the danger of absorption is increased by dilution, I have never experienced any trouble with it. Just one or two injections are sufficient.

The effects following these injections of phenol are truly remarkable: the inflammation subsides, suppuration is free, and the wound heals up in a shorter space of time than by the old methods.

If more crops of boils are likely to occur, calcium sulphide is given in 1-6-grain doses to saturation. As Dr. French expresses it, "Follow this plan, and you will be sure always to get satisfactory results."

L. A. ELMER.

Honea Path, S. C.

WHO'S TO BLAME?

I want to tell the "family" about a recent experience I had while trying to get my medical license transferred, by reciprocity from one state to another.

I am a graduate physician, holding the B. A. as well as the M. D. degree, and have been practising nine years. As a result of successive examinations, I held, at the time this story begins, licenses to practise in two of our states and in one British colony.

Recently a sudden turn in the wheel of fortune made it seem advisable to seek a residence in still another state, which fortunately (so I thought at the time) recipro-

cated as regards medical licenses with one in which I had already been examined and licensed. So I dropped in one day to discuss the matter with the secretary of the board of medical examiners of the state in which I intended to locate.

This gentleman thereupon handed me a large blank form on which were spaces for affidavits, before a notary public, by five persons, viz.: (1) secretary of the county medical society, (2) secretary of the state board of health, (3) president of the state board of health, (4) dean of my medical college, (5) the applicant. And these five persons resided in five different places, in three different states. If this form were properly filled out, he would present my case to the board, which was to meet in three weeks.

To be sure, I hadn't "studied in a medical school four terms of at least eight months each in four separate calendar years," but he anticipated no trouble on that account and thought the board would overlook that if I were all right in other ways.

You see, I was unfortunate in the fact that I had a complete scientific course before entering medical college. By virtue of this, and since I had studied more biology and chemistry than was taught in the medical college (and had taught chemistry besides), I was allowed by the medical school to enter the second-year class at once and so to complete my course in three years instead of the usual four. This was a customary proceeding a few years ago. I had been graduated *cum laude*, standing ninth in my class, and had even been a student assistant in the anatomy department during part of my course.

But because of this fact, my "only three years' study in a medical college," I am prohibited from even attempting the examinations in at least one-third of the states of our glorious republic, let alone passing them, unless I go to school one year more. Thus is the standard of our profession being raised!

But to resume. I told the secretary that I doubted whether this prescribed blank form would be able to make the circuit for the necessary signatures and get back in time for the board meeting only three weeks later. In that case, my application for license by reciprocity would have to go over until the next meeting, four months later. "Wouldn't he let me start out two blanks at the same time, get two affidavits on one sheet, and three on the other, and so expedite matters?" No, the ruling was very strict: all affidavits must be on *one* sheet.

So I sent off the blank form, letters of instruction for forwarding, enclosed a dollar bill to pay notary fees, stamps, envelopes, etc., and then began to "plug" a quiz compend of useless information about medical theories and hypotheses, in order to be ready for the examination which I might have to take.

On the day the state board met I was on hand, but my credentials were not. To be sure, I had my diploma, state license, and a certificate of membership in that most august, honest, wise, and useful organization, which is forever working self-sacrificingly in the interests of us doctors, you know, "The American Medical Association." (Gentlemen, this is the proper time to take off your hats, when this name is mentioned!) But these credentials did not amount to the "hill of beans" of proverbial fame. The necessary affidavits hadn't arrived, so I must take the examinations or wait four months more, in the hope that the missing papers might turn up and be on hand in time for the November meeting.

I took the "exams"—and right here I want to tell you about two or three questions that were fired at us. First that old hoary one, "Trace the digestion of a ham-sandwich." That was easy. But I think it would have been more to the point to see whether I knew what to do with a ham-sandwich that was only half way through a man's gut and then *refused to be digested!* Don't you? And here's another, "Which bone of the skeleton ossifies first?" If you don't know you are excusable, for Gray, Piersol, and Cunningham can't agree on the matter. And how many of you know the "composition of compound chlorine solution"? And if you do, how much better off are you? One enterprising youth caught a hasty glimpse over the examiner's shoulder of the questions on "diseases of the eye," just previous to the distribution of the papers, so we all knew about retinal hemorrhages, glaucoma, and pterygium when the time came. Nobody flunked in that part of the "exam," rest assured.

This examination was in July. I sent the blank form away in June. Here it is September, and that paper hasn't been heard from yet. What has become of it? I sent it first to the secretary of a county medical society in a distant state where I had formerly resided. He had to swear that I "was in good and regular standing" in the society. Now I had been gone from that state nearly a year, been examined, licensed, and in practice in a British colony since I last saw him.

How could I "be in good standing," i. e., good enough to satisfy a board of political—excuse me, I mean medical—examiners? And, yet, strange to say, I am in just as good standing now as I ever was.

There were but five of us doctors in the whole county and no meetings of the society were ever held. The secretary of the society called no meeting, but simply gave me a sly wink and "cast a unanimous ballot" for me in the privacy of the back room of his drugstore and thereby admitted me to membership in that highly scientific organization, "The —— County Medical Society of the State of ——." I never paid any fees, for there were none to pay; but by means of his signature I had been enabled to join the state society and then that national organization aforementioned that looks out for us doctors' interests.

I had previously explained this difficulty to the secretary of the examining board. So he told me that the oath of two doctors, that "I was all right," would do, but the two doctors must reside in the state where I formerly lived. I might have been "all right" years ago in California, I might be "all right" now in Missouri, but two resident doctors of the state of X must swear that I was "all right" in X during my residence there, in order that the affidavit be of any value in reciprocity matters.

Perhaps that is the trouble. It is possible that the secretary doesn't consider that I was "all right" in some minor matter between those certain dates and doesn't like to embarrass either of us by saying so. At any rate, I haven't heard from him yet, and it is thirteen weeks since I sent the papers to him. I have written to him again, too, enclosed a stamp also, but so far have failed to "get a rise" out of him. But if he will only return my dollar bill I'm willing to let the matter drop where it is.

The constitution of the United States of America allows each state to exercise police powers in its own territory. But it also guarantees to each citizen the right to pursue any lawful calling unmolested—does it not? But does it sanction a condition of affairs such as I have just related? Can a state transfer its right to police its territory in medical matters to a board of medical politicians, and they in turn make my professional career and means of earning a living dependent on the whim of a shiftless dummy secretary of a nonexistent county medical society in another state, the said secretary being legally responsible to nobody? Can police powers be thus delegated to irresponsible parties under our constitution?

This secretary's signature was necessary if I was to gain admission to the state or national societies. His own state requires that doctors entering or leaving the state by reciprocity be members of the state and national organizations. And, yet, neither the national organization nor the state society is willing to be responsible for said secretary's action, or inaction, allows him to keep my dollar, and there is not a law that can touch him.

And the same may be said of the president of the state board of health, of its secretary, and of the dean of the medical school from which I was graduated in still another state. Each one of these four men has the power to keep me from getting reciprocity papers—more power than any one member of the examining board of the state where I now reside, more in fact than all of them combined. For I might bring civil suit against them; against the others, I am powerless in court.

Now the "leaders" of the profession are continually howling because we small fry don't get enthusiastic about boosting the great central organization and contributing to its support. It is just such illogical, nonsensical display of authority as I have related that disgusts any thinking doctor. And, for the existing conditions, we have only the American Medical Association to blame.

Through its constituent state and county societies, by means of political jobbery, the A. M. A. has obtained legislation that makes its petty county and state officials virtually courts of last resort in deciding a man's professional fate. There is no legal appeal from the decision of an irresponsible county secretary. And all this in an effort to "raise the standard of the profession!"

What decent-minded man can help being disgusted by such lawlessness or graft? Is there anything about "organized medicine" today to attract an honest man into it?

Between the sessions of the recent examining board, I had a heart-to-heart talk with its president. He admitted that the whole scheme was wrong, and in conclusion he said: "Some day some doctor will carry this matter of reciprocity as now conducted to the Supreme Court of the United States, and the whole scheme will be smashed and every state made to change its laws." How I wish I had the money to make the fight!

In June, 1909, I published an article in this journal, entitled "Why I Left the

County Medical Society." I'm out now. This article is written, in an effort to find out an answer to this question, "Why Should I Get in Again?" If the majority of doctors approve of this way of doing things, I guess I'll stay out. If they don't, why don't they stop it?

And now, Dr. H. I. Mukamuk of the "organized profession," you think you have been reading the wail of a sorehead who flunked the state examinations, don't you? Stung! I passed and am in practice again. But I'm mad through and through, just as mad as though I had flunked.

A NEW ENGLAND PILL-SLINGER.

THE MEDICAL HISTORY OF NAPOLEON'S CAMPAIGN IN RUSSIA IN THE YEAR 1812

Many of our readers probably have seen chapters of the contributions, especially in *The Medical Fortnightly*, that have been published by Dr. Achilles Rose on the subject named in the heading. Dr. Rose now informs us that, in addition to the ten chapters that have so far appeared in different medical journals during the past eleven years, several more are ready for the press.

In compliance with the wishes of several of Dr. Rose's correspondents, he has decided to collect and bring out in book form this series of papers on the Russian Campaign. The undertaking will be assured if 400 advance subscribers will indicate their willingness to buy the book when completed. The volume is to contain more than 300 pages and will be sold at one dollar per copy to advance subscribers, while the regular price to subsequent purchasers will be $1.50.

In the chapters which we have read, Dr. Rose has succeeded in painting a vivid picture of the medical history of this famous campaign, and we are convinced that the book, presenting as it does the entire subject in a collected form, would prove of immense interest. We wish to encourage all readers of CLINICAL MEDICINE who may be interested in the history of medicine to send their subscription to Dr. Rose, at 173 Lexington Avenue, New York City.

THE BACILLUS LACTIS BULGARICUS FOR INTESTINAL TROUBLES OF INFANTS

In *The Journal of the American Medical Association* for June 29, Dr. Ralph Oakley Clock, of New York, reports his experience with tablets prepared from a pure culture of the bacillus lactis bulgaricus triturated with sugar of milk. These were employed, in bottle-fed babies, in gastroenteritis, both in its mild, severe and toxic forms, in enterocolitis, and in similar conditions. Some of the cases were of the most severe type of gastrointestinal disturbance, but in every instance a decidedly effective and happy result followed.

The gastric symptoms quickly disappeared, the toxemia subsided, mucus and blood disappeared from the stools and they soon lost their foul odor, the digestion improved, and the stools became well-formed and normal in color usually on the third or fourth day; there never was any return of the intestinal disturbance in any of the subjects.

The treatment in each one of the cases consisted solely in the administration of tablets containing a pure culture of the bacillus lactis bulgaricus. One tablet dissolved in a teaspoonful of water was given after every bottle-feeding, while sometimes the tablets were given before as well as after feeding.

In some cases the treatment was employed without change of diet, and the author justly calls attention to the fact that this is superior to the treatment by starvation-diet, purgatives, colonic irrigations, etc., which of itself produces loss of weight, and strength and tends to prolong the duration of the disease.

The gain in weight that followed the author's treatment in every instance was due, probably, to the fact that after the putrefactive process, which had been arrested by the action of the bacillus lactis bulgaricus, the digestive tract was able to take care of the food and which previously had caused indigestion. Hence the food began to satisfy the caloric needs of the infant and thus nutrition suffered less.

The infants varied in age from five weeks to ten months. The results were complete and permanent, without a single failure or relapse. The diet consisted of condensed milk, top-milk formulas, milk modified with proprietary food, whole milk and barley water, peptogenic milk, whey and dextrinized barley gruel, and modified milk with milk-sugar.

Dr. Clock's report makes a splendid showing for the value of lactic-acid cultures (bacillus lactis bulgaricus) in the treatment of intestinal disorders. The report is the more remarkable, as the whole cumbersome and difficult mechanism of treatment, which so often is impossible to be carried out by the mother or attendants, was done away

with, and with simple attention to general hygiene, cleanliness, etc., were sufficient adjuvants.

It is true that, as the doctor says, the intelligent care given to these infants in their homes, where the best of hygiene conditions prevail, probably aided in bringing about these rapid and favorable results. But intelligent care should be accorded infants in any case, though that, unfortunately, is not always sufficient to overcome disease.

A CASE OF CHICKEN-POX DURING CONFINEMENT

Dr. Bernard Myers reports, in *The British Medical Journal* for March 2, a case of chicken-pox which developed in a primipara, aged 30, on the tenth day of confinement. The affection had been transmitted from a sister of the patient, the sisters having been together three days before confinement. Although the patient became quite ill, she eventually recovered completely.

The baby, which was weaned and removed from the mother on the first appearance of the rash, developed a temperature of 100° F. for three days after leaving its mother and showed a tiny papular erythema upon its chest. It took its food well, had no vomiting or diarrhea, and seemed to be quite undisturbed in any way by the rash, which vanished after four days. Was this an abortive attack of chicken-pox? The little papules came out in crops, and the condition was not like any of the ordinary skin rashes which babies are subject to.

The peculiarities of the case, so far as the mother was concerned, were the predilection of the pocks for the labia majora and breasts, parts which were, one may presume, receiving a more generous blood supply, due to her recent pregnancy, than would otherwise obtain. The appearance of the first spot on the buttock was unusual. This spot, although at first unlike chicken-pox, subsequently went through the usual changes in a typical manner.

FAITH IN DRUGS

A paragraph in one of your editorials in the July issue of CLINICAL MEDICINE brings to mind a little incident.

A certain lady professor of sanctification was speaking to me of her sick husband, decrying the efficiency of drugs and extolling the virtues of faithful prayer. I listened respectfully to what she had to say; then, as soon as opportunity offered in the midst of a ceaseless flow of words, I delivered myself thus to her:

"My friend God made the wheat that nods and bends in the breeze, man made the machinery that harvests and makes the grain into flour, and of this, you, good women, make delicious bread, and you and I eat it and it preserves us soul and body. Good.

"God also made the noxious weed, so called, that grows in the damp and darkness of the mountain ravine; and, God the tender vine that climbs upon the trellised veranda and clings in graceful festoons to every spire and turret of the old castle that looks down from its dizzy height upon the ancient river as it winds its serpentine ways through the valley to the mother ocean. Of these, man makes drugs and applies them to the healing of his diseases, and they answer, in their humble way, just as worthy a purpose as does the bread you eat.

"You will eat the bread, but, in your fanaticism, you will not use the God-made herbs and their preparations for the healing of the sick.

"Now, then, my dear madam, if you do not do a little drugging and much praying, you are going to have a dead husband, and that pretty soon."

The woman took me at my word and forthwith went to drugging her husband and praying for him. And he got well.

Assuredly, I have no objection to prayers and pills combined; they constitute good "rational treatment." However, I want to be understood as believing that God made everything for a well-defined purpose (in His own mind), and that there is in the great armamentarium of nature a cure for every ill, only it needs to be found and applied "for the healing of the nations."

M. G. PRICE.

Mosheim, Tenn.

SIMPLE TREATMENT FOR BRIGHT'S DISEASE

For some time, I have been desiring to call your attention to numerous cases, acute and chronic, of Bright's disease coming under my care the past several years and their speedy recovery by just giving cream of tartar, 1-2 ounce in a glass of water during the day, and 12 drops of syrup of iodide of iron three times a day. Nothing more—and all is well.

In one case the albumin was 50 percent (by volume), there was swelling up to the

knees, of the hands, and under the eyes, and the patient was passing only two to four ounces of urine in twenty-four hours. I gave milk diet, and vegetables, cabbage chiefly. Is it not remarkable?

W. S. CLINE.

Woodstock, Va.

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[Of course cream of tartar will not absolutely *cure* chronic Bright's disease, nor is that, as I understand it, what Dr. Cline wishes us to gather from his interesting report. When gross changes have occurred in the kidney, with destruction of more or less of its functionating tissue, no remedy will restore it to its former power. But much can be done, and by simple remedies, to permit the individual to live in comparative comfort with his crippled organs. Compensation must be provided for on the part of the circulation and the other excretory apparatus. For instance, when the bowels and skin can be made to do more, the work of the kidneys is made less. I have seen a nice illustration of this fact in one of my old medical friends, whose urinary system is crippled. In summer, when his skin is active, he gets along nicely, but in the winter, when extra work is put upon the kidneys, he is in constant distress.

The cream of tartar is both a diaphoretic and laxative, besides having a gentle, non-irritant, diuretic action.—ED.]

BERBERINE A TISSUE CONSTRINGENT

It has been my custom to prescribe berberine for over-full (from venous congestion) and relaxed tissues, of a subacute or chronic type, anywhere in the body. In my clinic it has proven a very valuable agent in treating the diseases of Korean women who bear children early in life, take no care of the reproductive organs, and are subject to continuous abuse. They are difficult of cure for the same reasons and because they cannot get the necessary rest and restorative treatment. So it may be readily understood that "female complaint" is the rule in this country.

The majority of the women examined suffer from enlarged uterus, inelastic tissue, and from organs low down in the pelvis. The venous fulness of the pelvis is frequently shown by the edema about the ankles, either one or both, all of which has been noted in the absence of any organic heart disease.

I have now become much accustomed to making a diagnosis of venous engorgement of the pelvis from (1) a history of child-bearing, (2) absence of any heart disease, and (3) edema about the ankles. The digital examination is so often denied that I cannot include it every time as a means of making such a diagnosis. The Korean women, when asked, "What sickness?" often answer me by showing how the flesh around the ankle will pit on pressure.

Berberine sulphate, given in 1-4 to 1-2 grain doses three times a day, is unquestionably one of the most, if not the most, dependable remedy I have ever used to "take up the slack" wherever there is venous fulness and relaxed tissue of a subacute or chronic type.

Berberine sulphate is also a constituent of the most dependable eye remedy that we dispense from the clinic for indiscriminate use among these people, who suffer a great deal from affections of the conjunctiva; and the following formula, which we make up in large quantities, has given such universal satisfaction that the Koreans call for it specifically:

Berberine sulphate	grs. 32
Boric acid	drs. 2
Alcohol	dr. 1
Camphor water	drs. 4
Water, to make	ozs. 16

Make a solution and filter. Label: Drop in the eyes three or four times a day.

This makes a saturated solution adapted to the subacute and chronic types.

For the acute types, reduce the berberine in the formula to only 5 grains, which serves as an excellent coloring and is not too stimulating. Peppermint water may be substituted for the camphor water; however, the formula as given has been tried out and does not smart when dropped into the eye.

Do not commit the error of increasing the amount of boric acid or substituting glycerin for the alcohol, because glycerin will increase the tendency of boric acid to produce dryness of the lids. If dryness of the lids is noted during its use, discontinue until the roughness subsides. Then resume, but less frequently.

NEWTON H. BOWMAN.

Choon Chun, Korea.

BERBERINE IN FEEBLE LABOR-PAINS

On page 21 of No. 3, Volume 4, of *Helpful Hints for the Busy Doctor*, is a report of the use of berberine in feeble labor-pains, and a request for other reports. I give the following:

I was called at 4 p. m. to see Mrs. G., age 24, mother of one child, who had been bothered

with slow, ineffective labor-pains for about ten hours. At 4:30 I ordered the nurse to give two granules of 1-6 grain berberine hydrochloride each, or 1-3 grain. This was followed in fifteen minutes by another dose of the same size, and a third twenty minutes after the second. There was no need for another, and at six o'clock we had a fine nine-pound boy.

The story is not through yet, for, as I took hold of the uterus to aid in getting the placenta, I found it hard. The rush of blood following the delivery of the placenta, which is so often seen, was not present and there was no subsequent bleeding. On the tenth day the patient was up and in the best of condition. I can imagine a case where too violent contraction might be of a disastrous nature, but I expect to use berberine in all labor cases henceforth and govern the dose by the case.

WENDELL WHITE.

Los Angeles, Cal.

VACCINES IN TYPHOID FEVER

About six years ago the writer began to use vaccines in the treatment of typhoid fever. Since that time he has thus treated more than one hundred cases and has obtained numerous articles upon the same subject written by physicians in various parts of the world. It seems possible, however, that some may have escaped notice. He also realizes that many of the profession may have treated some cases without reporting them. A paper upon the subject is now in the course of preparation. In this it is earnestly desired to incorporate reports from a large number of cases, good, bad, and otherwise. He accordingly makes the following request to the readers of this journal:

Will anyone who has used vaccines in the treatment of typhoid fever, whether but one case or more, kindly communicate to him that fact, accompanied by name and address of the reporter. If the results have already been reported, a note of the journal in which they appeared will be sufficient. If they have not been reported, a short blank form will be sent to the physician to be filled out. Due credit will be given in the article to each person making a report. If any physician happens to know of other confrères who have any such cases, it will be appreciated if he sends their names, as they may not happen to read this note.

It is hoped that by this means a sufficient number of cases may be collected to somewhat definitely settle the now moot question whether vaccines are or are not of benefit in typhoid therapy.

Reports of cases will be accepted at any time in the future, but preferably by November or December of the present year.

DR. W. H. WATERS,

Director of the Department of Pathology and Bacteriology, Evans Institute for Clinical Research.

Boston, Mass.

INTESTINAL SEPSIS IN SURGICAL PATIENTS

Dr. Samuel D. Risley read a paper before the Academy of Ophthalmology and Oto-Laryngology at Indianapolis last September (*Ophthalmology*, January, 1912), under the title of "Intestinal Sepsis in Ocular Affections," which contains too many truths and important facts to be lost to the general practitioner, and we therefore offer herewith an abstract.

Dr. Risley calls attention to the fact that the efficiency of our work in clinic, dispensary, and hospital would be greatly enhanced by a more intimate knowledge of the conditions under which the average clinic patient lives. Especially in large cities the clinic and dispensary population is largely drawn from the inhabitants of the tenement districts, from the "submerged" population, the "great unwashed." This population, distinct from the other inhabitants of cities in many ways, forms a circling eddy beside the onflowing tide of life in a populous center, a Saragossa Sea peopled by human derelicts.

For three years, while acting as a visiting physician for the Northern Dispensary of Philadelphia, a large part of every day and of many nights was passed by the author in this semistagnant pool, with its crude dwellings, neglected decencies, filthy and malodorous patients and sick-rooms, watching the parturient mother already surrounded by a brood of unfortunates, the sick, indolent or drunken husband, the unfailing generosity and kindness of the equally unfortunate and helpless neighbors in poverty and distress.

Since, then, in every clinic of a great city a considerable percentage of the patients applying for treatment come from these infected and infecting eddies of population, reeking with odors from soiled clothing, unwashed bodies, blocked-up skins, infected alimentary tracts, and diseased mucus membranes, their admission to the wards of a hospital without adequate precaution naturally is fraught with peril to others. To pre-

scribe drugs which they are too poor to purchase, to administer medicines which cannot cure their degeneration—which is their disease—is useless.

It is such cases in which the hospital-surgeon feels a sense of helplessness, because only a solution of the complex social problems that are responsible for these conditions can be helpful. This explains the relatively better results secured in private than in hospital practice, notwithstanding the fact that the latter is done under a better sanitary equipment. The explanation is undoubtedly found in the unsanitary condition of the hospital patient.

Careless habits, unsanitary dwellings, and gross, uncleanly and improperly prepared food favor the cultivation of numerous intestinal bacteria which, together with their toxic products, are doubtless the origin, not only of many unclassified forms of general ill health, incipient cardiovascular disease, and so on, but of the socalled endogenous infections which so frequently undo the work of the surgeon in spite of local antispetic precautions. In addition to these considerations, we must remember that the chronically diseased nasopharynx and contiguous sinuses so common among these people, and their universally neglected oral cavities with ulcerated gums, stumps of decaying teeth and necrotic alveoli furnish a most fruitful source of local infection of the conjunctiva and often may be the origin of suppurative disease of the cornea and infection of wounds after operation.

The fact that convalescence so often is uneventful until after the dressings are removed, after the extraction of cataract or other operation, is suggestive. The condition of the mouth and nasopharynx, in which microbic colonies revel undisturbed, renders it almost certain that these infecting bodies are sprayed from the mouth and nostrils into the atmosphere of the ward and are carried by the fingers of the patient to the bedding and dressing, and thence to the eye after the bandage is removed.

It is, obviously, important, therefore, that the first care of the surgeon should be to improve the sanitary conditions of the hospital-patient before undertaking any operative interference, and that not the least important of these is the cleansing of the nostrils, mouth, and pharynx. The freeing of the alimentary tract of noxious contents by free purgation probably now is a matter of routine practice with every surgeon.

Metchnikoff has ascribed the relatively shorter life-term of those mammals having a larger colon than that of other vertebrates to the retention in the colon of waste products for considerable periods of time, these becoming the nidus for an abundant intestinal flora, which, through absorption, either of the microbes or their toxins, become harmful to the organism. That this is true of the human species is suggested by clinical observation, a striking example among many others being the phlyctenular ophthalmia of childhood. In this affection local treatment is futile until the uniformly associated alimentary disturbance is corrected by suitable treatment and the control of ingested foods.

These intestinal infections evidently must form an important etiological factor in cardiovascular diseases, and this is true, not only in those diseases in which the eyes are involved, but also in general. It is, however, of interest to learn from the author of the changes in the fundus that occur and can be diagnosed by the ophthalmologist in instances of the lithemic condition in its protean manifestations, in the rheumatic or gouty diathesis, and so on. The author shows that many cases of cataract and of inflammatory glaucoma are primarily due to intestinal sepsis which has led to cardiovascular disease, the latter manifesting itself locally in the eye lesions.

All this is not exactly new, and we have for many years insisted upon the extreme importance of intestinal cleanliness, not alone in the cure of disease, but in the preservation of health. It is gratifying to find our old contentions more and more referred to, even though we do not receive credit for making assertions which at first were almost laughed out of court.

CARE DURING PREGNANCY

Just a word, to emphasize the statements of Dr. Morrison in CLINICAL MEDICINE for August, page 860, paragraph two. In this paragraph the writer lays great stress upon the importance of watching a patient through the pregnant term and being prepared for labor when it occurs.

This is a subject that I have had on my mind and heart for twenty-five years, and have written on it a great deal. If any word I can say here will accentuate what the doctor has said and will impress physicians with the folly of neglecting the various conditions of disease that occur during the pregnant term, I shall be glad.

These conditions are all amenable to treament, and I say advisedly that no physi-

cian is justifiable, with the reliable measures we have at hand at the present time, in neglecting these conditions, and when severe labors and sometimes fatal complications occur, which could have been avoided by the early care and treatment of these conditions, we feel like accusing a physician of carelessness that might, in some cases, amount to being criminal.

This is a big subject and a very important one, and one that both the physician and the patient must have education in.

FINLEY ELLINGWOOD.

Chicago, Ill.

POSTURE IN THE PUERPERIUM

Dr. George L. Brodhead (*The Post-Graduate*, April, 1911) says that after delivery the patient may from the first be allowed to assume either a dorsal or lateral position. After a few days, if the breasts will permit of it, she should spend her time equally between the lateral, dorsal, and abdominal positions. If it is impossible for the patient to empty the rectum and bladder while in the dorsal position, she should be allowed to sit up on a chamber or commode.

In our experience, the abdominal posture is of particular advantage, not only in relieving the tedium of the dorsal and lateral positions, but also in aiding the uterus in assuming a normal position in the process of involution. We have also found that many patients could readily empty their bladders in this position when they failed to do so in any other way. The rectum can usually be emptied easily enough when one is lying on the back, but, in voiding the urine, much difficulty is often experienced. Personally, we do not think it wise to permit lying-in patients to sit up, for several days after delivery, on chamber or commode, having seen serious results in at least one instance.

POSTURE AFTER CONFINEMENT. REFLEX CONNECTION BETWEEN BREASTS AND UTERUS

In the June number of CLINICAL MEDICINE, page 665, I noticed one article, entitled "The Posture of the Lying-in Patient," to which I feel like adding a few words. Having been in practice for thirty years, and in this time attended many women in childbirth, I will briefly state what my experience has taught me.

My general rule has been to have the patient remain in bed for the first nine or ten days when possible. During this time, however, the woman sits up when attending to the calls of nature. I also advise that she turn on the side whenever she wishes, only keeping her flat on the back when there is severe laceration.

As there appears to be a very strong reflex connection between the breasts and the womb, I try to have every one of my patients to prepare her nipples, so that she will be saved from the tortures endured during nursing when the nipples are cracked, as well as to preserve the reflex for its full action upon the womb, in order to prevent flooding and also to induce full and perfect involution. I am satisfied, if this peculiar reflex action can be maintained to its full extent, that there will be no danger of a subinvolution.

W. E. MCCHESNEY.

Niagara Falls, N. Y.

THANK YOU, NEIGHBOR!

THE AMERICAN JOURNAL OF CLINICAL MEDICINE is the biggest number on our exchange table. It is full to overflowing of dependable therapeutic facts, and its contributors are legion. The April issue contains twelve leading articles, and its every department is full to overflowing with material for the enlightenment and edification of the doctor and his profession. A cut showing our own Dr. Conery and his Gray Gables is given a prominent place in the issue. Write the Company for a copy, if you have never seen the one paper that offers a postgraduate course twelve times in the year.—*The Nebraska Medical Outlook*. May, 1912.

DR. BROWNSON'S "HEALTH HINTS"

Dr. S. J. Brownson, of Fort Worth, Texas, has prepared a little pamphlet of "Health Hints," which he gives freely to those coming to him for professional advice. As he says, "Most of our suffering is due to easily avoidable causes. Therefore, to prevent disease by learning and conforming to nature's laws should be our aim rather than to cure it."

His hints are as follows:

1. Breathe deeply and plentifully of pure air. Cultivate chest expansion. Avoid being stoop-shouldered. Ventilate all living rooms thoroughly both day and night. Live as much as possible in the open air and especially the sunshine. We get more food from the air than from all other sources.

2. Drink from three to five pints of pure water on an empty stomach every day. A little coffee at the beginning of the meal or tea at the close is usually not harmful, but other fluids should

not be taken while eating nor for an hour after. No iced drinks.

3. Chew all food thoroughly until it is well mixed with the saliva. Eat very slowly and only when hungry. Don't overeat nor eat when very tired or angry or worried. No hard work either physical or mental should be undertaken immediately after a hearty meal.

4. Have a variety of food, but do not eat much at each meal In the main, cereals and eggs, soft boiled, should be used for breakfast; one kind of meat and fresh vegetables for dinner and rice and fresh milk or fruits for supper. The bread used at all meals should be made from the whole-wheat flour. Corn bread, butter and fat meat should be used more freely as cold weather approaches. The less cakes, pies, pastries and fried foods the better.

5. Use no intoxicants as a beverage. Tobacco and all narcotics are injurious to most people. Buttermilk between meals will preserve health and prolong life.

6. Bathe thoroughly once or twice a week. Cleanliness is an essential part of godliness. Therefore, keep clean externally, internally, and eternally. A sweat bath is a necessity whenever needed to keep the pores open.

7. Be regular in all habits, temperate in all indulgences, avoiding all extremes, worry, quarrels, ill-temper and great fatigue. An intensive life is not an extensive life. If you would be young when you are old, be old when you are young. A special feeling of languor or exhaustion after any period of activity or indulgence is nature's warning that you have gone too far.

8. The clothing should not constrict any portion of the body so as to hinder its full, symmetrical and harmonious action and development. Porous (preferably cotton) underwear should be used. High-heeled shoes are an abomination.

9. One free bowel action a day is a necessity.

"When nature calls at any door,
Do not attempt to bluff her;
But haste away at night or day,
Or health is sure to suffer."

Constipation is the cause of a large brood of diseases. It can generally be avoided or cured by using plenty of fresh vegetables and fruits. As old age comes on, less meat and more fruit should be used.

10. The sleeping room should be large, dark, quiet, and well ventilated. The young should not sleep with the very old. No child should sleep with a person whose body is poisoned with the nicotine of tobacco. The water taken from the bath in which an old tobacco user has been soaked will kill the insects on plants.

11. Complete periodic rest and relaxation of both mind and body is a necessity. At least one day in seven should be observed.

12. Look on the bright side of life as much as possible. Cultivate cheerfulness, placidity and will-power. Don't grieve over what cannot be helped. Think not of disease, pain and weakness; but dwell much upon the fact that infinite health, truth, strength, love, light, life and energy is yours. Thus you will come into unity and harmony with the divine mind.

13. Have an aim in life and pursue it vigorously and persistently. It should not be money-getting primarily, but the advancement of a higher civilization in some way. An occupation should be chosen to which you are naturally adapted. Act toward all others as you would toward a part of your own self. Try to help others to live better lives. This is right, and right makes might of the highest and most enduring character.

14. Take no medicine except on the advice of a good physician. Let him examine you occasionally, especially if you feel out of sorts, to see if there is any tendency to disease. An ounce of prevention is better than a hundred pounds of cure.

15. Marriage should be entered into by man at 20 to 30, and by woman at 18 to 26 years of age. From three to five children should be born in each family, three to five years apart. This is natures' plan for most people. The laws of matrimonial adaption should be studied by all young people. This would solve the divorce problem.

16. To make life worth living, in the main the day should be divided as follows: Eight hours should be spent in sleep; four in physical labor; four in study; and eight in recreation, attending to the demands of nature, and the cultivation of all the varied wants of our social, moral, spiritual, esthetical and aspirational being. Thus we shall be more fully correlated with nature's all-wise laws and so fulfil the end of our existence. Life is not for work and study, but work and study are for life, i. e., to develop our whole life, bodily and mental, in harmony with our divine environment.

17. If we, or others, can not live in this way under the present economic, political, social, financial or religious system, then we should help change the system, for man is infinitely more valuable than mammon. Life in its fulness, liberty and happiness are not to be compared with the slavery of sordid selfishness and greed for gold now dominant. Health of body and mind is the highest form of wealth.

18. This code of physical and mental hygienic maxims may not harmonize with the demands of frenzied finance, the hurry, worry, nerve-racking, disease-producing, money monomania of our time, or the cruel, crazy, cannibalistic methods of today; but it does harmonize with the infinitely more natural, sane and sensible principles of the cooperative commonwealth, the brotherhood of man, now being established.

REMINISCENCES OF A NEW ZEALAND PHYSICIAN

It is a very strange fact, but none the less true, that persons who have traveled a great deal in the East have very good memories. Some of my old brother medicos will recollect the Egyptian war of 1882, and the Soudanese war of 1884 and 1885.

In December, 1883, I was sent out with drafts of men to fill up the gap of the different regiments stationed at Alexandria, Egypt. The boat in which we were sent out was called the S. S. Italy, a hired transport. At that time there were seven troop-ships, H. M. S. "Assistance" for home stations, H. M. S's. "Crocodile," Malabar," Euphrates," "Jumna," and "Scrapis" for East Indian stations; and the "Himalaya" for West Indian stations. The S. S. "Ganges," a hired vessel, was the hospital-ship.

Fort Pharos and Fort Mix were riddled with bullets, most of the houses on the seashore were damaged, even Raseltiu palace, the beautiful residence of the Khedive of Egypt, at that time Tiwfik Pasha, was badly damaged. The grand square was a scene of devastation. The whole place was in ruins, even the houses of the different consulates did not escape. The grand tribunal, I think, was the least damaged. British troops were stationed at Ras-el-tiu (infantry), Fort Kom-ed-dek, and Kadahi House (artillery), Fort Napoleon (Egyptian), and Fort Max (artillery). Something like order was restored when we arrived on January 4, 1884.

The climate is something like that of New Zealand, only drier and not so rainy. I think New Zealand is the wettest country in the world. It is nearly always raining here and the atmosphere is too moist to be absolutely pleasant. It is certainly not an ideal country to live in. But to continue.

The population of Egypt included representatives of every country in the world, and every kind of money was in use. The natives, on the whole, are lazy, dirty, and sensual. It is a Mohammedan country. The women have to wear a veil; their eyes only are seen, and to look at one, in those times, meant the chance of having a knife driven between one's shoulders. Thank goodness, there were plenty of women of other nationalities, more beautiful than these; but there were some very ugly ones, too. The cafés were kept by Germans, Italians, French, Spanish, Austrians, and Greeks, and when one entered for refreshments the "Inglese" were always welcomed by a pair of sparkling eyes and a neat and trim figure, the belongings of a Continental girl. Those were the good old times.

The coins of the realm were piasters, ranging in value from 3-4 cent up to 5 cents in silver; then there were the gold piasters, worth about $2.50. English money was then, and is now, taken.

As to diseases among the natives, purulent ophthalmia was very prevalent those days. It was disseminated by the common fly. One would see flies sticking around the eyelids of people, asleep or awake, and they would never think of killing them or brushing them away; in fact, I do not remember ever seeing a native kill a fly. I believe it was against their religion to do so. Inasmuch as the water was bad and as yellow as brass, and could be obtained only from the Nile, it is no wonder that smallpox, typhoid, remittent and intermittent fevers, febricula, bubonic plague, and chloremia were very prevalent. Sunstrokes were frequent during the summer months.

With reference to our troops, every possible care was taken. There was a filter in every room, and yet the water, although clear, had a yellowish tinge. During the plague and the cholera season every precaution was taken and good advice given to the men as to their habits. As luck was with us, we had not a single case of plague or cholera in 1884 and few cases of typhoid fever. When it was possible, the troops went out route-marching into the country around by Diamethe and Rosetha and the artillery were sent to Boulak for an outing. On the whole, the worst cases were remittent and intermittent fevers and venereal diseases.

The general hospital for the Alexandria section was at Kanleh (which was at one time one of the Khedive's harems), a distance of four miles by railway. The sick were conveyed either by military ambulance wagons or by ambulance train. This building could hold at least 200 beds and was especially fitted up. It was a beautiful structure, both inside and outside. Its interior had spacious rooms as large as a ball-room, painted in blue or dark-green, relieved by red borders and mosaic work, with latticed windows, and was surrounded by beautiful flowers. The well-kept gardens and walks were magnificent, and the whole was bordered by a high walk on one side and the river on the other.

Small wonder that the men did not care to leave this paradise and often feigned sickness. There were no women nurses at that time, only the rank and file of the Army Hospital corps, but some of them were as gentle as any woman could be. I left Ramleh for Cairo in October, 1884, and was stationed at the citadel, but more anon.

(To be continued.)

F. A. P. MONTAGU.

Auckland, New Zealand.

VACCINATION, AND HOW TO PERFORM IT

More than a century of practice and a world of statistics have definitely established the value of vaccination. The actual practice, however, is as yet sadly neglected in the medical schools and not many physicians possess a thorough knowledge of this most important subject.

Vaccination is the artificial inoculation of vaccine, thereby producing vaccinia. Vaccinia is an eruptive disease of the cow, conveyed only by inoculation, and which causes

in the human a local reaction, or pock, and a general reaction, in the form of fever and other systemic disturbances, these being followed by a variable degree of immunity to smallpox.

Humanized lymph, for arm-to-arm vaccination, is obtained by pricking at several points an unbroken typical vesicle, preferably from a healthy child at least three months of age. Humanized lymph produces a more rapid evolution of the pock and milder constitutional symptoms than bovine virus. This has been replaced almost entirely by bovine virus, thereby eliminating the danger of communicating syphilis, tuberculosis, and other infections.

Etiology.—The element in the lymph causing the disease has not as yet been definitely determined. The pustules and epithelial cells of the pock contain vaccine-bodies that can be transmitted to the cornea of a rabbit, and these are considered by many to be protozoa.

Cowpox probably is smallpox (human) modified by passage through the cow; at least both have a common origin or ancestry: either one protects against the other.

Susceptibility.—Practically every human being is susceptible to vaccinia, although approximately one percent are immune to smallpox. It can be communicated only by inoculation, and to the following animals, besides humans: monkeys, cattle, horses, sheep, rabbits, guinea-pigs.

Age.—Between the third and fourth month is the most suitable time for vaccinating. Revaccinate at the age of ten or twelve, also immediately after exposure, and always in times of epidemics. Vaccination may be delayed at the discretion of the physician, provided smallpox is not prevalent, under the following conditions: If the child is poorly nourished, has diarrhea, vomiting, tuberculous glands, eczema, or has just been weaned or the food was otherwise changed. Children with congenital syphilis should be thoroughly treated before being vaccinated. During times of epidemic, there are practically no contraindications. Children with scarlet-fever, chicken-pox, diphtheria, measles or other acute diseases should be vaccinated.

Season.—Early spring, before setting in of the summer intestinal troubles, or late autumn, and before eruptive and bronchial diseases begin, are the best times for vaccinating. The pock develops more rapidly in warm than in cold weather.

Site.—Vaccination is usually performed over the insertion of the deltoid of the left arm, or at the junction of the two heads of the gastrocnemius muscle. Never vaccinate on the site of a skin disease, such as acne, impetigo, eczema, psoriasis or other local eruption.

Technic.—Too much stress cannot be placed upon the fact that vaccination is a surgical procedure. Careful aseptic precautions must be observed as to the site of operation and the instruments. Antiseptics, if used, must be completely removed. Clean the site with soap and water, then thoroughly dry with sterile gauze. Alcohol, ether or chloroform may be used, but must be allowed to evaporate or be removed with a pledget of gauze.

Scarify with a sterile needle, making multiple crossed incisions over an area not more than one-eighth of an inch in diameter. Avoid drawing blood; only serum should exude.

The virus should be thoroughly rubbed into the scarification by means of a sterile wood slip and then allowed to dry completely.

Protect the vaccination site with a piece of sterile gauze pinned to the undergarment. Never apply gauze or cotton directly, and do not fasten by means of adhesive plaster encircling the arm.

Typical Vaccinia.—The incubation period lasts three days, during which time there appears a slight local redness—the reaction to abrasion. On the third day the eruption appears as a hard papule surrounded by a delicate areola, which gradually enlarges. The papule becomes a vesicle on the fifth or sixth day and reaches its maximum on the eighth day. It is then round and shows a distended margin, is slightly elevated, pearly or yellowish in color, and umbilicated. Often there are minute vesicles in the surrounding indurated skin. There now appears an areola, or inflammatory band, graduating off from the vesicle to the surrounding skin. This areola increases and on the ninth day may extend half an inch beyond the lesion. About the tenth day the contents become purulent, forming the pustule, and the surrounding tissue becomes indurated and painful.

By the eleventh day a small central crust forms and the lesion begins to fade. This central crust gradually covers the entire pustule, and by the fourteenth day desiccation is complete. The lesion is now covered by a dry brownish scab, thin in the center and on the edge. The scab separates on the twenty-first to twenty-fifth day, leaving a circular pitted scar. This scar is red at

first, but soon blanches and then is paler than the surrounding skin. A perfectly typical scar is sharply cut and markedly depressed.

Constitutional Symptoms.—Beginning on the fifth day there is slight fever, usually lasting four or five days, accompanied by restlessness, headache or backache, loss of appetite, and irritability. A moderate leukocytosis appears on the third day and increases on the tenth day. The superficial lymphatic glands, axillary or inguinal, become enlarged and tender, but do not suppurate unless there is a pyogenic infection. The constitutional reaction is greatest in children.

Unusual Symptoms.—Sometimes the vesicles appear early and the crusts form in one week, the course being about one-half the usual time; or the eruption may be tardy and atypical, the vesicle not appearing until the seventh or eighth day.

There may be several well-defined small vesicles near the large one; these rarely become confluent.

General vaccinia is infrequent. The eruption is more or less marked on the wrists and back; usually more on the vaccinated limb. It appears on the eighth or tenth day and lasts two or three weeks. The pocks appear in successive groups and are to be found in all stages of development. A general eruption may be produced by scratching or autoinoculation, the virus being conveyed by the finger-nails. This is a serious condition and may be fatal in children.

Complications.—Secondary infection may be caused by injury or contaminated lymph or instruments. This complication usually appears during the first or second week and may be local or general. The infection is characterized by an intense inflammation, suppuration, ulceration, or even gangrene. Erythema or erysipelas, though rare, usually develop on the third to eighth day, and are to be suspected if the area of inflammation is greater than one inch in diameter. Syphilis is not communicable by pure bovine lymph. Tuberculosis is rare in calves and, if it or tetanus develop, these are secondary infections. A quiescent tuberculosis or congenital syphilis may become activated following vaccination.

Results.—Efficient vaccination in infancy with revaccination at puberty confer an almost complete immunity to smallpox. Vaccination produces complete immunity for at least two years, in many cases for ten years, and often for life. After ten years from eighty to ninety percent of all persons can be successfully revaccinated. The immunity gradually disappears, and with it the mildness of a smallpox attack, if it occurs, is lessened. Nevertheless the severity of the disease is always modified, even though complete immunity has been lost.

A successful vaccination, if performed during the first seven days after exposure to smallpox, will certainly prevent the disease; provided the reaction occurs normally on the third or fourth day. If done from the seventh to the tenth day, the attack will be modified; but after the tenth day vaccination only adds to the patient's suffering.

J. F. Biehn.

Chicago, Ill.

INTERNES WANTED

We are informed by Dr. Waugh, Dean of Bennett Medical College, that he has applications for internes which he is unable to fill. Every graduate of Bennett this year who desired such a position has secured one, and some very desirable vacancies remain to be filled. Dr. Waugh will be glad to place these at the disposal of graduates of other Chicago colleges who may desire them. Call on him at Bennett, 1360 Fulton St., Chicago.

SEA-SICKNESS AND CACTIN

Dr. Davis' article in the August number of Clinical Medicine (p. 857), on the uses of cactin, brings to mind my short note in the January issue (p. 104), on the use of cactin in car-sickness and sea-sickness, and leads me to tell my subsequent experiences with this drug.

Early in June six persons of this town started on a tour of Europe. They were given a sufficient quantity of cactin granules for a fair trial of its effects in preventing sea-sickness on the ocean, but they had no other preparation for the voyage in the way of prevention. Two members of the party have been heard from, and both report that none of the six had an attack. Furthermore, cactin has been used in this town by quite a number of persons for the purpose of preventing car-sickness and in every instance proved effective. It seems to me that this fact ought to be more widely known to those contemplating sea voyages.

I may add that I have used cactin in two instances where there was a smothering

sensation, one being in a case of menopause. In the other one I do not know the cause. This lady was a sister of a woman in my household whose mother died in the same condition. This sister was sent for, as the attending doctor expected the patient to die. Told of this, I gave her some cactin with directions for use and told her to give it "to effect." After the fourth dose the symptoms began to improve and in a few days the lady was about the house again.

G. H. FRENCH.

Carbondale, Ill.

A VERY SMALL BABY

Enclosed you will find photograph of a baby and its nurse. This baby-girl I delivered in this city February 11, 1912.

The parents have been married twelve years and this is their first child. The father is five feet, ten inches in height, and weighs 190 pounds. The mother is five feet tall; weight, 110 pounds. Both are of normal health.

The baby at birth weighed 1 pound and 6 ounces, but was a normal child. At two

A picture of the baby as it looks now.

months of age it weighed 2 pounds, and now, at 6 months, it weighs 7 pounds and is in normal health.

A finger-ring from my little finger would slip over its arms or legs.

Can any of the "family" beat this?

Permit me to say that CLINICAL MEDICINE is one of the medical journals that I endeavor to digest, mentally, before it goes on file

The same baby with another of the same age.

Each new number seems to be better than the preceding one.

E. P. CLEMENS.

Dayton, O.

[We are unable to find a report of a smaller baby (surviving birth for any considerable time) than this one. However, we have not made an exhaustive search of the literature and it is possible that there may be smaller ones on record. We shall be glad to have reports from our readers.—ED.]

SUMMER AT SITKA

Quaint old Sitka, the Russian capital of Alaska, is a very pleasant summer resort. About eleven hundred persons make up the town, eight hundred of them Indians. It is a little "left over" since the capital was removed to Juneau, in 1906, but is none the worse for that for a summer resort. The Russians have left their imprint here more than anywhere in Alaska. The summers are cool and winter weather seldom reaches zero.

A peculiar situation here is a hospital of twenty beds without a patient for more than

a year; neither is there an undertaker in town. The health of the vicinity is looked after in an able manner by Drs. Johnson and Gibson. The Presbyterian mission has the Sheldon Jackson Industrial School here, which is doing an excellent work among the Indians, who are better civilized and more prosperous probably than any in Alaska.

I must not forget to say that I saw many of Abbott's alkaloids here, and copies of THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

E. S. McKEE.

Cincinnati, O.

NEWS NOTES

DR. L. G. BROWN, a chiropractor of Quincy, Illinois, was recently sued by the Illinois State Board of Health for practising medicine illegally. He was fined $100 and costs.

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ACCORDING to a new ruling, Ohio physicians will hereafter be required to report their cases of tuberculosis to the health authorities. A similar ruling is to be enforced in the city of Atlanta, Georgia.

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REVEREND CHARLES KELLAR, a Catholic priest, who was graduated in June from the American Medical College in St. Louis, is now taking a postgraduate course at Harvard, preparing himself to become a medical missionary among the lepers of the Hawaiian Islands.

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SPEAKING of appendicitis, I am reminded of an observation ascribed to Dr. Robert T. Morris, to the effect that in operating for that disease on women, New York surgeons have been obliged to move the incision down another two inches, on account of the extreme decolleté cut of the 1912 gowns.

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A DETERMINED effort is being made to secure the combination of three Baltimore medical colleges, viz.: the University of Maryland, the College of Physicians and Surgeons, and the Baltimore Medical College. In order to insure the success of such a plan, it is thought that an endowment fund of $500,000 to $1,000,000 should be raised.

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The Mississippi Valley Medical Association meets in Chicago, at the Hotel Sherman, October 22–24. There will be special clinics for visiting physicians for several days, before and after the sessions of the Association. This will be a fine meeting. Be sure to come if you can, and come out to Ravenswood and see us while in Chicago.

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BUBONIC plague seems to be spreading all over the world. It is now present in a number of places in South America, while the latest places to be attacked were Porto Rico and Cuba. Strenuous efforts (apparently successful) are being made to eliminate it from both these islands. Recently rats infected with the plague were discovered by the local authorities in New Orleans, so they believed, but the U. S. Public Health Service has been unable to verify these findings.

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THE New York Post-Graduate School and Hospital has recently been reorganized. Dr. James F. McKernon has been elected president in place of Dr. George N. Miller, resigned. The officers now are: President, James F. McKernon, M. D.; second vice-president, Edward Quintard, M. D.; treasurer, William Fahnestock, Esq.; secretary, Arthur F. Chace, M. D.; secretary of the faculty, George G. Ward, Jr., M. D.; superintendent, H. T. Summersgill, M. D.

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THE old question as to whether or not the physician should be permitted to take the life of a sufferer from an incurable disease has been raised again by the appeal made to Governor Dix by Mrs. Sarah Harris, a woman 33 years old, incurably paralyzed and confined in an Albany, N. Y., public institution, who asks that an act of the legislature be passed making it lawful to end her sufferings by a merciful death. For three years this woman has been unable to move without intense pain, and yet it is said that she may survive for twenty years.

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ANOTHER martyr to science is Assistant Surgeon T. B. McClintic, of the United States Public Health Service, who died during August from the Rocky Mountain spotted-, or "tick-," fever, which he had been investigating for the last two years. Through his efforts mainly the disease had been largely eradicated from the Bitter Root Valley, Montana, where it has prevailed most extensively. By the way, we want a brief article on spotted-fever from some of our medical friends who have actually seen the disease in the Rocky Mountain region. Who will write such an article?

THE medical colleges of the state of New York, acting under the direction of Commissioner Porter of the state health department, are arranging a systematic course of instruction in public health and the prevention of disease. The plan of instruction is being prepared by the following committee: Dr. William A. Howe, deputy state commissioner of health; Dr. John L. Heffron. Syracuse University College of Medicine; Dr. Royal S. Copeland, of the New York Homeopathic Medical College; Dr. Bensel, of the Medical Department of Columbia University; and Dr. W. H. Park, of the Bellevue and New York University Medical College.

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IT is stated, on newspaper authority, that Drs. John F. Anderson and Joseph Goldberger, of the Hygienic Laboratory at Washington, D. C., have ascertained that the dried particles of skin of a child suffering from measles, which rub off during the period of convalescence, have no influence in the spread of the disease. The contagion is really conveyed by the secretions of the nose and mouth. Furthermore, as soon as the rash has disappeared and the child has begun to get well, the danger of the transmission of the infection from that patient is at an end. If these findings are verified, they will be of the utmost importance to every physician and will decidedly shorten the quarantine period.

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THE *New Yorker Medizinische Monatsschrift* has copied from an Austrian medical journal information to the effect that, in express trains going to and from Carlsbad, arrangements have recently been made for physicians to accompany these trains, to be at the service of passengers becoming ill during the journey. This is of particular value to people who leave Carlsbad, because these frequently are invalids. A proportion of the coach is arranged as a consultation room and contains a small drug-cabinet. This innovation is tentative, but as it undoubtedly will be found useful, it will be further developed.

It might not be amiss to point out that physicians traveling officially on the railroads might very well extend their duties to the inspection of the sanitary and hygienic provisions on the trains. They should, above all, make sure that the coaches are properly ventilated, that the closets are kept clean, and that in general the sanitation is properly observed. In our country, where much longer trips are of daily occurrence than is the case in Germany and Austria, such an institution might prove decidedly desirable.

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A GOOD story is told about one of our old friends, Dr. L. S. Rogers, formerly of Bakersfield, California, now of San Francisco. At the time when the physicians were trying to find the ball which sent President McKinley to his grave, Dr. Rogers was called upon to treat a similar case. As the ball was beyond reach, the doctor made the patient as comfortable as possible and gave him a dose of physic. The next day the bullet was recovered in the stool. The late Judge N. R. Wilkinson, who was a good deal of a wag, on hearing of the circumstances, insisted that a telegram be sent on to McKinley's bedside. "Tell those doctors back there," said the judge, "that we have got a doctor in Bakersfield who can find that bullet." Those who knew Dr. Rogers' faith in elimination could see the point.

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WE have just learned of the death of our old friend and frequent contributor, Dr. Heneage Gibbes, of McAlester, Oklahoma. We understand that he passed away in July, but the exact date has not yet been ascertained. Dr. Gibbes was a native of Scotland, a member of an old medical family, both his father and grandfather having been physicians of eminence, the latter, we believe, physician to the royal family in Edinburgh. Dr. Gibbes came to this country many years ago, and was long one of the leading practitioners in Detroit, Michigan, where he was known as a skilful research worker and investigator, and as a teacher of pathology (we think) in the state university. He was the joint author, with Professor Shirley of the University of Michigan Medical School, of the socalled Shirley-Gibbes method of treating tuberculosis, which was much in vogue twenty years ago. Dr. Gibbes was an extensive contributor to the literature of our profession, and had an international reputation. He always had a special interest in therapeutics, and much of his published work was in this field. He has written frequently for CLINCAL MEDICINE, and we still have on hand an article from his pen, on "The Smoker's Tongue," which will appear later. It was our privilege to know Dr. Gibbes intimately. His erudition was profound, and in spite of some external gruffness of manner, which might repel those who did not know him, he was a man of warm affections, who loved his friends, and was loved by them. We shall miss him.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER A. M., M. D.

The Combining of Remedies

I HAVE been reading a book by Dr. Harrington Sainsbury, entitled "Principia Therapeutica," in which I find an excellent chapter on the "combining of remedies." I will reproduce here a portion of the chapter, the remainder to follow next month. To wit:

When, after the siege of Troy, Ulysses set the beaks of his ships homeward to Ithaca, we know that he had before him a voyage as devious, as tortuous as the workings of his own crafty mind. To follow these wanderings, to measure and mark, were a task of no little magnitude for the student who, curious of detail, should attempt it. And yet, if we attend only to the effective steps in these journeyings, without regard to all those doings and undoings which advanced not at all the traveler's return, how simple the problem. A vertical of longitude through Troy as the starting point, a transverse of latitude starting from Ithaca, the goal, these give us, in their intersection, our ordinate and abscissa of starting-point and goal respectively; and in these we read directly the exact degree of southing and of westing necessary to compass Ulysses' objective. All other journeyings profited not at all, though the Pillars of Hercules had been reached, or beyond, before the rocky island gave the anchorage.

After this fashion, the physicist, by the method of projection, brings out the real significance of any course, however labyrinthine; the only data required being the position of the points which mark the beginning and ending of the course.

Some such method as this is needed by the pharmacologist, when we picture to ourselves the complexity of the task which faces him, if he prepares to follow and resolve the action of a given substance as it travels through the system. At every point in its journey its incidence must be felt. These contacts will follow each other in time; they will differ in degree and in kind, as the reacting tissues, which feel the impacts, themselves differ in build and quality.

To assume that this sequence of effects and this variety of actions will all be in one sense, in one direction, is to assume the improbable, not to say the impossible. Without reasonable doubt the sum total of effects will include a mass of conflicting elements; influence here being opposed by action there; and, upon algebraic summation, there will emerge a resultant as incommensurate with the aggregate of actions, as the crow's flight from Troy to Ithaca when compared with the wandering of the son of Laertes.

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To take a concrete case. Foxglove, by its influence upon the circulatory system, and by the preponderance of this action upon the left ventricle of the heart and the systemic branchings of the arterial tree, raises the muscular tone of both and causes a general rise in blood pressure. But the contraction of the arterioles, which is a prime factor in this rise, will vary in the different vascular areas, by reason of the difference in their innervation and in the muscularity of their vessel-walls. As a result, we shall have the vessels here more open, there more contracted, and the blood, escaping under pressure along the lines of least resistance, will flow here in fuller, there in thinner stream. We may even witness what appears to be an anomaly, viz., that, while in general the arterioles will show us contraction, more or less, a certain set of branchings may actually dilate under the influence of the drug.

Accepting the phenomenon, we have no reason to think its explanation is to be sought in a selective and special action upon a particular vascular area; we have no reason, indeed, to think that in this area of increased vascularity the vessels do not receive, and respond to, the same stimulus under which the arterioles generally are contracting.

The reason for the difference in effect is to be sought rather in the poor development of the vasomotor control in the area in question, which makes it impossible for its vessels to withstand the more powerful constriction which is taking place elsewhere; accordingly the last-named must prevail, and the vessels

of weak contractile power will dilate passively under the rising blood pressure. The cerebral arteries are such vessels of relatively weak innervation, and it is quite possible that they may behave as above stated, under the influence of digitalis.

The rate of flow of a liquid through a system of tubes being directly as the pressure, but inversely as the resistance, this behavior of the vessels of the brain will mean a luxus supply of blood to that organ. At the same time, it is quite possible that an improved flow will be taking place through the capillaries of the system generally, the raised arterial pressure more than compensating for the narrowing of the arterioles. This will not mean, necessarily, more blood in the parts supplied—indeed, there may be less—but it will mean more current and less stagnation. The change, in fact, will be one of distribution, more blood being now on the arterial side, less on the venous side, and a quicker flow across the capillaries.

But there is reason to believe that on occasion constriction may so raise the resistance locally as seriously to diminish the flow in a particular district.

The renal vessels are instances of this; and, with larger doses of digitalis, we do, at times, witness such narrowing of the arteries that the kidney is practically starved and the secretion of urine temporarily suppressed. This effect must be regarded as the result of toxic doses, but it may none the less be cited as exemplifying the diversity in action of a given agent and how, under the impress of one and the same medicament, a single system may react so as to present here an organ flushed, there an organ starved, and, between these, all degrees of blood supply.

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Other things being equal, blood supply will measure functional activity, and therefore this scale of circulatory activity will represent a corresponding scale of activity in the tissues and organs severally.

What will be the resultant effect upon the circulation through the tissues of the body as a whole? A positive one, doubtless, when the remedy is administered in a suitable case of heart failure; but we stand greatly in need of the method of projection when we desire to go further, and arrive at quantitative estimate of the net gain to the economy.

If, in a comparatively simple case like this, we need the method, how much more do we require it when we attempt to estimate quantitatively the effects of a medicine such as physostigmine. The pharmacology of this drug is very complex: its incidence is a marked one upon the central nervous system; the respiration and the circulation, directly or indirectly, are affected; the skeletal muscles and the unstriped muscular fibers generally are strongly acted upon; also several important secretions; lastly there is a specific action upon the internal mechanism of the eye. The therapeutic outcome of all this is disappointingly small, and wholly disproportionate to the manifestations which the drug develops in detail; so disproportionate that we are tempted to inquire whether this is due to our inability to make proper use of the virtues of the drug, or to the fact that the energies developed are at such cross-purposes that in the end little remains over for therapeutic utilization.

In any case, the need for a method of quantitative summation is most clear, and it is the lack of this which makes so bewildering the attempt to piece together the findings of the pharmacologist and bring them into line with the experience of the therapeutist. Above all, it is necessary to use caution in deducing from these same findings, when they have been obtained from experiment upon isolated organs.

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It is twanging on the strings of a pretty old harp, to comment on money and call it by any other name than God. But the strings are not yet worn out; they are not even frayed; so I am going to tune up once more, and with just a suspicion of hope that some who hear my plaint may be benefited.

Amber, that good woman who has done more than a woman's part at striking at sorrow when it was quick: in fighting suffering when it seemed about to overwhelm, and in gladdening the hearts of countless ones who were crying for some word or token of happiness to brighten the darkness about them—Amber, good Amber, has written of "Desire for Gold," gold that would buy things.

Amber wrote of one of those days that come to all of us who are poor in worldly goods; when things go wrong, and we sit on the jagged rock of sacrifice and want, to see our neighbors simply hold out their hands to have piled into them the things we sometimes crave. So her mood was a good one to illustrate what I would say.

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Some of us have had poverty poured out to us in every form and have gulped it down to the bitterest of its dregs. And we have *done things* with the ferocity of a beast,

that we might have that with which to give to others the necessities of life.

And this is just what money is for—to obtain things, necessary as well as unnecessary, for ourselves and for those whose welfare is in our hands. Beyond this, it is dross, yes, dangerous dross—powerful enough to bury us, to take us from ourselves in our attempt to possess it or in our possession of it.

Money, today, is the goal for which the whole civilized world is struggling. It is the shrine at which the whole world worships. It is the instrument employed for good, it is the instrument employed for harm.

In religion, in politics, in business, in society; in vice, sin, crime, money is the first and the foremost, and without it, under present conditions, none of these could exist.

The possession of money is largely a matter of chance: the obtaining it, by accumulation in any considerable amount, is chance; but it is also a study, and of such a nature that every energy must be focused toward it.

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An unselfish man seldom becomes wealthy.

The man whose life is given to the service of his fellow men generally leaves his widow and his children a legacy of unpaid bills.

The man who writes, paints or teaches is rare, who can buy and pay for a suit of clothes when he needs it.

The man is rare, who is satisfied with his condition; whose employment is to his liking; whose wages seem sufficient for the work he does. And the reason for this is that he spends as he goes. The instinct for accumulation is in him, but the ability is not.

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Men who have accumulated, or have had accumulated for them, money of sufficient quantity that they may be called rich have set a pace. They build for themselves great houses that reek with money; they furnish them elaborately and often with vulgar ostentation. They have well-filled and splendidly equipped stables, with slaves to tend to them. They have lackeys to right of them and to left of them—all so far down in the scale of humanity as to do the bidding of their masters with the humility of whipped pups; despicable fawning, servile creatures whose independence is lost, even to the selection of the clothes they wear. I pity them, these vulgar-rich, these look-at-the-dash-I-cut snobs and plutocrats—men so devoid of humanity that they are not ashamed to stoop to make a brother man bend to do their priggish biddings.

But all these things are harmless so far as the really wealthy are concerned, save that—as I said before—they set a pace for fools to follow. That the pace is followed, need not be told, for the class of imitators is too large to escape observation.

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What will a man do to make money? There is no limit, if he has at his elbow those for whom money must be made; those whose ambition it is to do as their neighbors do; those who are members of the Hell-makers, that body called "Society." If the income from regular channels be too meager, it must be augmented, for a voice stronger than his calls to him for luxuries that have become necessities to the imitators. An income that will permit comfortable clothes, a modest home, good honest food, and a bit of recreation now and then is not enough these days. There must be money provided for "gowns," instead of for dresses; a house on the Dollar-side of the town; servants to feed, lodge, and pay; maids for the children; automobiles, carriages and horses for pleasure—partly, for ostentation largely. And for these the precept is: "Get money, honestly if you can—but, get it! For we want it; must have it; and will have it."

This is the truth, and custom does not permit those to be blamed who must have things as good as their neighbors. Rather, it mocks those who can not "go their neighbors one better."

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Clothes make the woman of society, and Society curls its lip. Society does not know the man in overalls; knows not the woman of limited wardrobe.

Society, in its demands upon the purse, leads men in the highways and byways of intrigue, deception, fraud. It makes of him a schemer, a liar, and a thief—paralyzed as to conscience; merciless, should mercy stand in the way of his obtaining that for which he is seeking.

Society stunts. It puts blinders on the moral, a check rein on the mental, a curb on the physical nature.

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"I want one good square fling on earth before I die," writes Amber. "I want to go to the theater in a swell carriage, in the best box, with a pale-pink boa draped about my shoulders. I want the sensation, for once, of knowing that I am as well dressed as I am virtuous. I want to own a silk umbrella and wear a diamond ring on every finger."

[To be continued]

AMONG the BOOKS

KYLE'S "EAR, NOSE, AND THROAT"

A Manual of the Diseases of the Ear, Nose, and Throat. By John Johnson Kyle, B. S., M. D. Third edition, revised and enlarged; 176 illustrations. Philadelphia: P. Blakiston's Sons & Co. 1912. Price $3.00.

This is the third edition of a most complete and valuable manual, bound in morocco, with thin paper, and in a form that is very easily handled: put up in the inimitable manner customary of this publishing house.

The author has given us an excellent treatise on the subjects named, with thorough detail, and still very concisely. The sections that will appeal strongly to the family doctor are the careful instructions, not only as to diagnosis and symptoms, but, best of all, the treatment and therapeutics. It is passing strange, though, that such a keen author and careful publishers should allow a book to leave their hands with so many errors in the prescriptions. Hardly a page that has not at least one misspelled word.

L. N. GROSVENOR.

REIK'S "EAR, NOSE, AND THROAT"

Diseases of the Ear, Nose, and Throat. For the Family Physician and the Undergraduate Medical Student. By Henry Ottridge Reik, M. D.; assisted by A. J. Neilson Reik, M. D. With 81 illustrations in the text and 2 colored insertions. New York and London: D. Appleton & Co. 1911.

In this book we have one that is written for the use of the family physician, and its teachings are most reliable and useful. Thorough, practical, and just what the doctor needs; one which covers all the points that he needs to know about these subjects; exactly what he may be required to know; and nothing more than he should be compelled to acquire.

The family physician is shown how far he may proceed and just when he will find it justifiable or expedient to seek the assistance of one especially trained and equipped for the treatment of difficult cases, to the end that all patients may be provided with the best of care and the doctor, himself, saved from blame for culpable negligence or malpractice. It gives thorough details as to the care of the inflammatory diseases of the middle ear and its complications. There is a fine chapter devoted to the general diseases in which aural complications are prone to occur, notably measles and scarlet-fever.

The last half of the book is devoted to the nose and throat. Details are given as to diagnosis and treatment of the nasal diseases and the complicating troubles in the sinuses. In another chapter the care of the tonsils and adenoids is well presented. Then the general diseases in which the affections of throat and nose may be anticipated. Altogether a finely written, interesting, and reliable volume that the family physician should have handy on his desk.

L. N. GROSVENOR.

"THE UNIVERSAL MEDICAL RECORD"

With the beginning of this year a new review journal, published in London, made its bow to the medical profession, which, besides making a feature of abstracts, epitomes, and summaries of current medical literature, promised to seek those contributions to the medical sciences, those indications of moving opinion, those suggestions of particular importance which deserve the attention of medical men who desire to keep abreast of the times.

With the June number, *The Universal Medical Record* completed its first volume, this constituting 576 reading pages and the index, which has just been received. This index, which contains full cross-references, shows a marked wealth of information and bears witness to the conscientious work and to the discrimination of the editors.

The abstracts from current literature and the reviews which occupy the larger portion of each individual number are not only well selected but well written. They are quite sufficiently extensive and complete to be of value to the practitioner, and in many cases even for the research-worker and the writer.

Each number contains, in addition, at least one essay dealing with some matter of cardinal importance and written from first-hand knowledge by an author of repute. In accordance with this policy, we find an article on the "Importance of Precision in Nomenclature," by Sir T. Clifford Allbutt; in another number we find remarks on chronic hemolytic and on pancreatic jaundice by Dr. H. D. Rolleston.

We congratulate the editors of *The Universal Medical Record* on the splendid accomplishment of their program and wish them many successful years of activity. The journal is published at 36–38 Whitefriar Street, London, E. C.; the subscription being about $5.00. (2 Volumes annually.) This certainly is a very low price for the value received.

HISS AND ZINSSER'S "BACTERIOLOGY"

A Textbook of Bacteriology. A Practical Treatise for Students and Practitioners of Medicine. By Philip Hanson Hiss, Jr., M. D., and Hans Zinsser, M. D. With 156 illustrations in the text, some of which are colored. New York: D. Appleton & Co. 1910. Price $3.75.

Hiss and Zinsser's textbook of bacteriology has been adopted in medical colleges throughout the country, and it fully deserves this distinction. It presents an excellent description of the pathogenic bacteria, their discovery and culturing, and also of their pathogenic action. The reviewer was particularly struck with the clear and lucid treatment of the theory of immunity, which is a very difficult subject for those physicians to master who completed their studies before the days of the present bacteriologic era.

"INTERNATIONAL CLINICS"

International Clinics. A quarterly of illustrated clinic lectures and especially prepared original articles by the leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D. Volumes I and II, 22nd series. Philadelphia: J. B. Lippincott Company. 1912. Price $2.00 per volume.

THE CONKEY "ENCYCLOPEDIA"

A universal reference library, in the arts, sciences, and literature, with nearly 1000 illustrations, half-tone engravings, etchings, drawings, plans, and maps. Editor in chief, Bernhart Paul Holst. Associated editor, Ruric Neval Roark. In two volumes. Chicago: W. B. Conkey Company.

The publishers of this excellent little encyclopedia are to be congratulated upon the results of their enterprise. In the small scope of two octavo volumes, the encyclopedic knowledge that may reasonably be expected from a person of broad general culture and information is presented, and also much pertaining to special sciences. The several paragraphs are concise and brief, but contain everything that is required, unless, indeed, for purposes of special study.

The work has been brought fully to date. It is beautifully illustrated. The type is clear and easily read, and the thin paper has enabled the publishers to keep the dimensions down to a handy size. The reviewer feels certain that this little encyclopedia will become a faithful friend to many to whom the larger works are impossible of acquisition.

HENRY PHIPPS REPORT

The Sixth Annual Report of the Henry Phipps Institute for the Study, Treatment and Preventiorr of Tuberculosis. Published under the auspices of the University of Pennsylvania, by the Henry Phipps Institute, 1912.

This report, which covers the period from February 1, 1908, to February 1, 1910, like its predecessors, supplies the results of observations made in the Henry Phipps Institute, which has done so much for the study, treatment and prevention of tuberculosis in our country. Through the generosity of the founder and of the physicians in charge of the institution, untold good has been done to the charges of the Institute, and indirectly to humanity, by means of investigations which are constantly carried out with the abundant clinical material. The report contains several interesting papers, and is of great value.

ENZ'S "PATHOGENETIC MATERIA MEDICA"

Pathogenetic Materia Medica. By Elizabeth E. Enz, M. D. Kansas City: The Burton Publishing Company. 1911. Price $5.00.

The author of this book is professor of materia medica at Hahnemann Medical College at Kansas City, and has collected from all available sources the working material for a practical materia medica for homeopathic physicians. To us, most of

the terms and the treatment of the subject-matter are unaccustomed, but the work is, nevertheless, of great interest also to other than homeopathic physicians, because it presents the views of the school of Hahnemann, to whom medicine owes a great debt which is now freely acknowledged.

AUDEL'S "ANSWER ON AUTOMOBILES"

Answers on Automobiles, for Owners, Operators, Repairmen, Relating to the Parts, Operation, Care, Management, Road Driving, etc. Fully illustrated and indexed. By Gideon Harris and associates. New York: Theo. Audel & Co. 1912. Price $1.50.

"This new book on the practical care and management of motor cars, explains in questions and answers the principles of construction and operation in a clear and helpful way. It is illustrated with 380 diagrams and drawings, making it of great value to the intending purchaser, driver and repair man. In this 512-page book the symptoms are diagnosed in such simple language that a beginner can understand the why, and this will enable you to get more service and speed from your machine. Every rattle—every jar—every noise, is a symptom that you can cure, by knowing. With this as a guide you will keep your car in running order 365 days a year—each day you can obtain a greater efficiency from it."

The above is quoted from the publisher's announcement.

As the book will undoubtedly prove of value to many physicians who own and operate cars, we have made arrangements with the publishers to supply it. You may send your order to the book department of CLINICAL MEDICINE.

THE DRUGGISTS CIRCULAR'S "MODERN MATERIA MEDICA"

The Modern Materia Medica. The source, chemical and physical properties, therapeutic action, dosage, antidotes, and incompatibilities of all additions to the newer materia medica that are likely to be called for on prescriptions, together with the name and address of the manufacturer or proprietor, and in the case of foreign articles, of the American agent. Second edition, revised and enlarged. Duodecimo, 432 pages. New York: The Druggists Circular. 1911. Price $1.25.

When, five years ago, the first edition of this cyclopedia of new medicaments was reviewed the need for such a work of reference was apparent. There is today a greater rather than a diminishing need, because there has been no falling off in the output of the prolific originators of medicinal compounds and combinations. Every dispensing pharmacist knows the frequency with which the names of new things turn up in his department; hence he will recognize the value of a book that will tell him where to get them, their dosage, and how they behave when combined with other substances.

Although the book makes no pretense at instructing in therapy, it will be useful to the physician, because of the information therein relative to doses and incompatibilities and the insight given into the real worth of the articles described. A knowledge, too, of the name and address of the manufacturer is of use to the physician who may desire literature having to do with a new medicament.—From *Oil, Paint and Drug Reporter.*

ATKINSON'S "MASTERY OF BEING"

The Mastery of Being. A Study of the Ultimate Principle of Reality, and the Practical Application Thereof. By William Walker Atkinson. Holyoke, Mass.: Elizabeth Towne Company. Price $1.00.

In this little book the author, who has been associated with various new-thought literature, endeavors to set forth that mind is the most substantial thing in the universe; that man IS SPIRIT; that back of the manifestation of the YOU there lies "the totality of being." He then proceeds to unfold the very plan of being, and its application to mankind. The sum-total of his conclusions points to a glorious present for humanity, and presents a new and enlarged view of man and his powers. He leads up to just what his title indicates—the "MASTERY OF BEING." The author is in accord with, and, in his opinion, "just a little in advance of" the latest conclusions in science and philosophy.

This book is a strictly philosophical effort at solving that question of questions—the explanation of Existence; the author accepting the latest teachings of science, as well as reasoning logically. His philosophy is the monism of Haeckel, with a superadded mysticism.

The book is heartily recommended to all desirous of getting in a nutshell a clear conception of what is meant by monism, the *Oneness* of Nature, the "substance" underlying the phenomenal, and the creation and recreations of the worlds.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWER TO QUERY

ANSWER TO QUERY 5821.—"Sure Signs of Pregnancy." As to the sure signs of pregnancy, I should like to say that you certainly have covered the ground. I wish, however, to add that in my twenty years' experience I have found but very few cases of early pregnancy that would not answer to the following test:

Between the periods of the first and third months (the most tedious to test), I have found that, by titillating or using friction over the parts between the anterior wall of the vagina and using the pubes as a base for the thumb, at the same time using friction over the clitoris, the uterus will not straighten out in the axis of its canal, when pregnant, but will recede. The exception is where the woman uses extra effort.

E. P. CLEMENS.

Dayton, O.

QUERIES

QUERY 5848.—"Wood, not Worms." R. H. H., Arkansas, sends some unusual substance voided by a woman of about 55 and asks us to identify the "parasite" which she has been passing for ten to twelve years.

What you have sent us, doctor, are not parasites, but wood-fiber, or lignin. As we have no idea of the patient's occupation or mental condition, we are unable to venture any intelligent comment, but it is possible that there is some gastric or intestinal irritation which causes the woman to desire to chew wood—toothpicks, excelsior, pine shavings, etc. It is just possible, of course, that she has worked at some place where tiny particles of excelsior float in the air, and which she swallowed, but this is very unlikely. There is no question as to the character of the substance. We trust you will look into this matter carefully and favor us with further information.

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QUERY 5849.—"Elixir of Life." "Pensions for Old Doctors." J. H. F., Delaware, writes: "Do you know that Dr. Frank Starkey of Philadelphia has at last discovered the elixir of life? We may now be able to reach the one-hundred-mile post.

"Don't you think the government should grant pensions to old and worn-out physicians, men like myself, who have been in the field over fifty years, fighting an endless battle with death and disease?"

Dr. Starkey does not claim to have discovered the "elixir of life," and regrets the publicity given his preparation by the press. The real value of the Starkey formula has yet to be decided by rational clinical tests. Unfortunately, experience teaches us that birth, maturity and decay are three basic conditions which cannot be materially changed; man like every other living thing upon the earth has his "set seasons." He is produced, matures (or ripens), and dies, then disintegrates, to become again a part of the elemental substances.

We may, it is true, by rational living prolong our span of life, to a certain extent, but we very much doubt whether human beings are intended to live beyond a century. There are exceptions to all rules, but how many centenarians are there whose lives can be deemed worth living? When a man's forces, mental and physical, have so declined that he, like the infant, finds it desirable to sleep most of the time, life is not such a

desirable thing, and nine out of ten of the octogenarians we have known have expressed a willingness—even a desire—to enter upon their last long sleep. Very old people live in the past. They have no future, and the events of today are of little interest to them. As an old patient recently expressed it: "When one has to drop out of the procession it is time to go home. Nobody wants to straggle along in the gutter a half a mile behind when his fellows are marching four abreast, down the middle of the street, with the band playing ahead."

We quite agree with you that something should be done for the old and worn-out physician. He has fought a good and long fight for others, and has generally failed to secure a sufficient supply of life's good things for himself. We are trying our utmost to teach the doctor that it is his duty to be a business as well as a professional man. Where his heart and duty tell him to serve another, without reward, he should do so, but where patients are abundantly able to pay for service rendered they should be made to pay and the doctor should see that they do pay promptly. He should invest his earnings wisely while he is able to work, then, when the twilight comes and he finds himself pushed into the background, he will be independent, and, more important still, he will not enter the valley wondering what is to become of the wife who so nobly struggled with him during the years of activity, or such children as may yet be unable to make their own way in life. The first duty of every man is to see to it that those near and dear to him are protected from want when he is no longer able to care for them.

We wish our correspondent and others of the "old guard" would write short pregnant papers upon this very topic, thus impressing forcibly upon the young doctor the necessity of making hay while there is hay to make and he is capable of "getting it in." Hay there will always be; but what boots the most bountiful crop if it belongs to some other fellow or one lacks the ability to harvest the yield of his own fields. If we serve our fellow men for pay we must save part of our earnings for the inevitable "rainy period"; if we serve them faithfully and to a real extent gratuitously we are entitled to care—generous care—in our old age.

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QUERY 5850.—"Cystitis and Ascending Infection." J. T. M., California, asks a diagnosis in the case of a lady, age 30, weight, 145 pounds. She has complained of enuresis since childhood. There have been occasional attacks of mild cystitis, lasting a week or two, during the past twelve years. Two children, youngest eight years; labors normal. No history of any illness except the bladder trouble and six attacks of menorrhagia, lasting two weeks, with much pelvic or cystic pain. No reason to believe that she ever interfered with possible pregnancy, as she desired more children.

Backache and leg-ache very severe during each period since puberty. Uterus normal in size and position. Little discharge. Present trouble severe last six months, characterized by periods of a week or ten days of extreme frequency in urination with burning and tenesmus, passing usually very small quantities, usually associated with constant backache over kidneys. At these times she complains of marked uterine prolapse and dragging which she manually relieved with finger pressing uterus up. Uterus at that time very large. She was thoroughly curetted a few months ago. Her bladder capacity is 14 ounces.

This viscus has been thoroughly and repeatedly washed out with boric-acid solution, and hexamethylenamine has been given persistently, also oil of santal and various other drugs, with no apparent results. The Moro test was positive, but no tubercle bacilli can be detected in the pus, and the general appearance is robust.

One of the strange features is the passing of large quantities of high specific-gravity urine, alternating with small quantities of low, with the widest variations in its character. There has been no typical attack of renal colic and repeated radiographs fail to show stones in the kidney or ureter. No enlargement or malposition of kidney can be detected. The typical pains of nephritic colic have never appeared. The ureteral segregation test has not been made. On two occasions there has been moderate fever at the time of aggravated tenesmus and backache, both times at a menstrual period, when there was an unusually free flow. Bladder is not tender on palpation at any time. Exacerbations usually marked by pronounced general weakness and depression, although no loss in weight. [A urinary chart is omitted for lack of space.—ED.]

We regret to say that we are unable to arrive at any positive conclusion. As you are well aware, tubercle bacilli need not be detected even though the Moro test is positive, but as this woman has been ill for twelve years and still remains robust and has not

at any time presented a temperature, the evidence is against tuberculous kidney. Have you thought of the possibility of an old-standing infection with the Neisser bacillus?

It seems to us that one kidney is not functionating. Disease may be in the kidney itself or the ureter may be occluded with debris. Note that on certain days only, small quantities of urine are voided, then all of a sudden about double or three times the quantity be passed, and this contains pus and colon bacilli. This would lead us to believe that certain times the obstruction washed away and urine from the affected side enters the bladder. It is probable that the bladder was infected primarily, and that you have to deal with an ascending infection.

A cystoscope and separator should be used in this case. You state in your letter, "uterus normal in size and position," and later say "at these times she complains of marked uterine prolapse which is relieved with the finger pressing up the uterus, which at that time is very large." If there is uterine engorgement and prolapse, that organ should receive attention and be replaced. We are inclined to think, however, that this is a complication, and that the really serious disease will be found in the kidney. However, you must not forget the possibility of ovarian involvement.

This woman requires the most thorough examination and very careful treatment, possibly an operation. If it is impossible to use the cystoscope, we suggest that you secure and send to our pathologist a specimen of discharge from cervix, a blood smear, and a 4-ounce specimen of urine, secured, if possible, when the amount voided in twenty-four hours is below normal; and a second specimen of urine secured when full voidance occurs should also be sent.

Examine the lower bowel carefully. See if there is any venereal history on the husband's side. This is a very interesting case and we present it for discussion.

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QUERY 5851—"Helminthologic Riddle." A. H. H., Iowa, reports the case of a man who, during the past five years, has been in the hands of "all the other doctors in town and in several of the neighboring towns, also of Omaha specialists." He had spent all his money and became a county charge. One physician said he had "cancer of the liver"; another said, "cancer (or tumor) of the stomach"; Omaha specialists said he had "anemia," but without naming any cause. When first seen by our correspondent, there was a "lump" a little below and to the right of the pit of the stomach, which he maintained was gas, as he could "rub it away." He complained also of pains about the liver. To quote:

"He was put on iron, chionanthus, and chelidonium, with the daily use of the wall-plate and vibration over the liver and course of the colon, for inveterate constipation; the colon was flushed with cold water daily. He was placed on a Bennett spiral electrode, attached to the positive, with the negative over the abdomen. Once when the electrode was over this lump, it (the electrode) was thrown up about two feet high and fell off on the floor. After a while he began passing dead worms. He was then given three 2-grain doses of santonin in one afternoon, but without results. This passing of dead worms continued at intervals. At the beginning his blood tested 50 in a scale of 100, at the end of the year it was normal. This year he fell into other hands.

"In August his wife saw the doctor and asked him to call. He found the patient's feet and legs badly swollen. The man had been told to call the doctor when he had got rid of any worms, and so one day when the doctor passed his house the patient said to him, "There is one of those dead worms in that paper out on the steps." Upon examination, little more than a greasy streak was found, at its greatest width about 1-16 of an inch and 12 to 14 inches long; the head seemed to be as thick as any part of the body.

"All the authorities on the subject of worms and the yearbooks were consulted, and it was noted that thymol had been given for 'rare kinds of worm' with good results. All authorities agreed it should be given in from 2- to 7-grain doses. It was explained to the patient (a very intelligent man) that the anemic condition was caused by these parasites and if they could not be gotten rid of he would most likely pass in his checks in two or three months. The doctor explained the action of the drug and what the authorities said about the dose, and said, 'If you will take the chances, I will give you 2 drams in 3-grain doses, and, if it kills you, it will only cut you short two or three months. 'Go ahead with your rat killin', replied the sick man.

"The next morning he took a saline cathartic. With other matter passed, there was a double handful of slimy pieces of worms of all sizes. He has passed five hundred or

more of these pests. No bad effects from the thymol were experienced. He gained twenty-three pounds. Later, however, he again began to have a 'raking sensation like a nutmeg-grater,' as he explained it, and again dead worms began to come away. The thymol was repeated, but with no perceptible results.

"These things seem to be thrown off dead at stated periods of from two to four weeks, the head evidently remaining in the host.

"It is strange that he never saw any more pass for more than five years, until when the battery was used for about six months. He says he told several doctors that he had worms, but they laughed at him."

Truly this, as reported, is a puzzling case. We understand that the "lump a little below and to the right of the pit of the stomach" has disappeared, so it would be safe to exclude malignancy. We cannot understand, however, the activity of the said lump. Even a bunch of roundworms in the colon could hardly be active enough to "throw an electrode into the air." It would seem probable that in that instance the current was a little too strong and the abdominal muscles contracted sharply enough to cause the implement to bound.

The parasites voided should have been examined by an experienced pathologist. It is not possible to make an identification from the meagre description furnished. If more specimens can possibly be secured, send them to our laboratory promptly.

A good preparation of aspidium may be depended upon to remove tenias, but, to get rid of lumbricoids, santonin and calomel or the Barron formula should be exhibited. Thymol destroys the hookworm, and, if one does not give oil or fat with or immediately after the drug (to cause solution) it is comparatively safe.

In the present case, we would suggest thorough massage of the abdominal area or the use of the faradic current, after a preliminary cleansing of the intestinal tract with calomel, 1-6 grain; podophyllin, 1-6 grain; and iridin, 1-6 grain, half-hourly for four doses, followed by a saline laxative the next morning; repeating this every third night. Then let the patient take a teniacide.

Carefully examine the resultant stools, and if any parasites whatever are passed send them to us. If of unusual character, it would be well, we think, to send some of the feces also. Should the teniacide not expel worms, give, two days later, half that dose at 8 in the morning and at noon. At this time give a good dose of castor oil. Watch the stools carefully. Repeat the procedure the third day.

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QUERY 5852.—"Icterus Neonatorum." J. H. W., Ohio, is treating a lady 37 years of age who has had five children, the two oldest of whom are living (aged 17 and 15, respectively), while the other three died, when a few days old, of jaundice. The woman is now seven and one-half months pregnant, and the doctor asks: "Is there anything I can do before birth and after the child is born to prevent jaundice? Both father and mother are in good health and always have been."

You do not give us any clear idea, doctor, of the condition of the mother. Is there, possibly, any possibility of a syphilitic taint? As to the cause of icterus neonatorum, that is not as yet well understood. However, in the more simple form it can hardly be looked upon as pathologic; indeed, a very large percentage of children present symptoms of jaundice not very long after birth.

If the child is icteric at birth, we should advise to give a few doses of calomel and podophyllotoxin, 1-10 and 1-64 grain, respectively, and follow with an ounce or two of a sweetened solution of effervescent magnesium sulphate. Or, 1-10 grain of calomel every four hours, and 1-64 grain of podophyllotoxin with every second dose; the saline laxative solution, administered with a dropper every ten or fifteen minutes, until 2 ounces has been given, three hours later, usually proves effective. Chionanthoid, 1-6 grain, may be given to the child every four hours for the next few days, the granule being placed in the child's mouth just before giving the breast. The mercurial and podophyllotoxin should be repeated on the third and seventh night, at the end of which period you should have a "white" baby.

Some of the more serious forms of this disease can not be controlled, and we very much question the possibility of directly affecting the infant in the womb at this late date in the case of your client. Carefully examine the mother's urine, and be sure to maintain elimination of solids, and urea especially. Keep her bowels freely open and stimulate hepatic activity. Institute medication as soon as the child is born if there is the slightest sign of jaundice.

In this connection, doctor, let us call your attention to the chapters on icterus neonatorum in the more modern works on diseases of children. Chapin and Pisek treat this

subject extensively, while Jacobi's articles, which appeared in *Modern Clinical Medicine*, are worth careful study. Chapin and Pisek agree with the writer that the disease is frequently of luetic origin and also state that the infant need not necessarily die.

The graver form of icterus, fortunately, is very rarely met with. In such cases certain inflammatory changes have occurred in the liver, with, perhaps, inflammation of the biliary canals. This lesion is apt to be one of the results of congenital syphilis. A perihepatitis may cause the complete obliteration of the biliary passages.

Pisek states that perhaps the commonest manifestation of the graver form of icterus is seen in connection with septic poisoning, generally accompanied by phlebitis. The bile itself may carry an infective agent, as can readily be understood. Unless the mother is syphilitic, such inflammatory conditions would not occur in a number of her children.

In Fischer's "Diseases of Infancy and Childhood," a case somewhat similar to that reported by you is described by Dr. Mahrenlander, who tells of the fourth child of such a series born of apparently healthy parents. Three children had previously died of jaundice a few days after birth, nothing having been noticeable except yellow pigmentation of the skin.

In the case directly under Mahrenlander's observation, the child had expired shortly before his arrival at the house, having lived three days. The skin presented a deep yellowish-green pigmentation, more marked on the abdomen. There was no inflammatory condition of the umbilicus; the cord had been aseptically dressed and no infection from this source could be suspected. There was one stool just before the infant died, but there was no vomiting or other symptoms. Bear in mind that this was the fourth child in that family which died of icterus a few days after birth. In each instance the children died without apparent suffering, their temperatures were normal, and there were absolutely no symptoms of illness. Syphilis in the father was suspected, and this, later, was proved.

Voorhees states that all the women confined at the Sloane Maternity receive chloroform, and that about 33 percent of the infants born are jaundiced. All the premature infants were also icteric. It is the opinion of several observers that icterus may result from the effects of chloroform passing through the placenta; however, the writer has delivered under chloroform anesthesia more than fifty times, but none of the children were jaundiced.

Look into this case further, doctor. If the coming child should suffer from icterus neonatorum, institute the treatment suggested. Should it fail, as it naturally will in the graver form of the disease, try to secure an autopsy and, if possible, forward the liver to our pathologist for examination.

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QUERY 5853.—"Goiter." H. P. H., Montana, writes that he finds it difficult to obtain reliable information about simple enlargement of the thyroid gland, or goiter. He continues:

"For some reason, not as yet determined, there are, in Helena and over Montana generally, an astonishing number of women, small girls, and even men, afflicted with this trouble. One can count as many as six or seven while walking the length of a city block. Girls so affected that have not yet reached the age of puberty, even as young as six or seven years of age, can frequently be seen. Some of the physicians here attributed it to the water, as most of it flows down the mountain sides and is collected in reservoirs for the city's use, assuming that the water holds in solution some chemical that acts as an irritant to the thyroid gland. Others think it is the high altitude. Still others ascribe the condition to the large consumption of mutton. None of these theories is convincing, and some even are absurd. I have observed closely, but I cannot determine anything that may reasonably be suspected as the exciting cause.

What I wish to know about especially is as to whether there is a treatment more effectual than that with calcidin in large doses and the use of iodine locally. Also, have you any theory as to the cause of goiter; and, then, is there anything new in recent medical literature on the subject? I have tried thyroid extract and find it useless. I have such an excellent opportunity for studying the disease and of trying out any new theory in regard to its treatment that I intend to do all I can to determine its causation and compass a cure. In pursuit of this purpose, I am anxious to obtain all the information possible on the subject, for at best it will be meagre enough; therefore, any and all knowledge you may have on the subject or any suggestions as to where information may be obtained will be gratefully received."

The following will be found a very efficacious treatment for simple goiter; still, one must

always remember that here, as elsewhere, the conditions present in the individual must be considered and the treatment modified to meet the requirements:

Internal medication: Strychnine arsenate, gr. 1-64; ergotin, gr. 1-3; quinine hydroferrocyanide, gr. 1-6, given every four hours. Irisoid, gr. 1-6; phytolaccoid, gr. 1-3, one hour before food. Calx iodata, two 1-3-grain tablets three times a day on an empty stomach. Apply to the goiter itself compresses wrung out of a strong solution of potassium iodide. If possible, twice a week treat with the galvanic current for ten to fifteen minutes, placing the negative electrode on the wet compress. We know of no local application more effective than potassium iodide. In the intervals between the electrical treatment, the patient may inunct 1-2 to 1 dram of ointment of potassium iodide.

During the last year or so, chromium sulphate has proven remarkably effective in a considerable number of instances, 5 to 10 grains of the chemical being given three times a day. In cases seen *early*, we should be inclined to alternate thyroid gland with chromium sulphate.

If the goiter has become cystic, surgical treatment alone will yield results.

Water containing lime, as you know, is apt to cause goiter, if drank for a long period. Thus, in some of the cantons of Switzerland, about 70 percent of the population are goitrous. We suggest that you have a specimen of the water examined by a competent chemist. In certain parts of Colorado, goiter is extremely common, and some observers attribute the condition to drinking water that has filtered through chalky strata; but investigation has proven that hundreds of people in this region have consumed such water without becoming affected with goiter.

Some bacteriologists are inclined to attribute the prevalence of goiter in certain districts to the presence of particular bacteria that seem to be most frequently present in water issuing from chalky deposits and then flowing over the upper soil. For instance, in Denver, the water flows down the mountains and is exposed—at least in many cases—to contact with chalk. It is quite possible that the causative organisms thrive more abundantly in waters that are strongly charged with calcium salts.

The whole subject, it is clear, requires thorough investigation; still, it is practically safe to assert that people drinking from deep wells in chalky soils do not, as a rule, develop goiter, whereas individuals consuming surface water in a chalky country frequently are goitrous.

More recently large doses of quinine and ergotin, alternated with sparteine and iron arsenate or iodide, have been recommended in medical literature. Also, various suprarenal-gland preparations have been tested and unquestionably have proven beneficial where there was lowered arterial tension.

We shall be greatly pleased to aid in the study of this affection, so far as lies in our power, hoping eventually to be able to formulate some effective plan for combating this condition.

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QUERY 5854.—"Intravenous Injections of Arsenic and Iron." B. D. B., Virginia, puts this question: "If iron and arsenic are such effective blood builders when given internally, why would not much better and quicker results follow their intravenous injection in blood dyscrasias and conditions of low vitality? Has a suitable fluid yet been prepared? Such a combination, with nuclein added, might be just a little bit better in many chronic ailments than either singly administered by mouth, hypodermically, or even intravenously."

An intravenous chalybeate is being offered by French chemists, being a sterile solution of citrate of iron, sodium arsenate and strychnine in ampules, and the preparation seems to meet with some approval. Undoubtedly such sterile solutions marketed in ampules containing one adult dose may later take the place of the hypodermic tablets.

The three arsenates of iron, quinine and strychnine, with nuclein, have proved, as you doubtless are aware, extremely effective hematinics. Sodium arsenate and iron are largely employed by Italian physicians in treating leukocythemia. They use it in two strengths, namely: (1) hypodermic dose, 1 Cc. equivalent to 1-2 milligram of arsenous acid; (2) 1 Cc. equivalent to 1 milligram. Injections are made as deeply as possible at one- to two-day intervals. Treatment extends over one or two months.

One or two English pharmacists prepare "sterules" (ampules) of solutions of arsenic and iron, arsenic and strychnine, and arsenic, strychnine and quinine; but since the cacodylates have come in, the earlier arsenical preparations are not so much used. Intravenous injections are not always desirable and, moreover, not every man practising medicine is prepared to administer them.